

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION

SOUTH CAROLINA ELECTRIC & GAS : VOLUME I
COMPANY :
 :
vs. :
 :
UGI UTILITIES, INC. : 2:06 CV 2627

Trial in the above-captioned matter held on
Monday, March 16, 2009, commencing at 10:08 a.m., before
the Hon. C. Weston Houck, in Courtroom IV, United States
Courthouse, 85 Broad Street, Charleston, South Carolina.

APPEARANCES:

BRUCE FELMLY, ESQ., BARRY NEEDLEMAN, ESQ.,
and CATHRYN E. VAUGHN, ESQ., P.O. Box 326,
Manchester, NH, appeared for plaintiff.

ELIZABETH PARTLOW, ESQ., 1320 Main Street,
Columbia, SC, appeared for plaintiff.

JAY N. VARON, ESQ., 3000 K Street NW,
Washington, DC, appeared for defendant.

PAUL BARGREN, ESQ., 777 E. Wisconsin Ave.,
Milwaukee, WI, appeared for defendant.

R. SCOTT WALLINGER, JR., ESQ., P.O. Box 12487,
Columbia, SC, appeared for defendant.

REPORTED BY DEBRA LEE POTOCKI, RMR, RDR, CRR
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I N D E X

WITNESS: THOMAS EFFINGER

Direct Examination by Mr. Felmly..... 28
Cross-Examination by Mr. Bargren..... 184

EXHIBITS:	<u>Received in Evidence</u>
Plaintiff's Exhibit 12	175
Plaintiff's Exhibit 14	176
Plaintiff's Exhibit 11	177
Plaintiff's Exhibit 33	177
Plaintiff's Exhibit 242	178

1 THE COURT: This is Civil Action 06-2627, South
2 Carolina Electric and Gas Company, plaintiff, against the UGI
3 Utilities, defendants.

4 The case is called for trial this morning nonjury. I
5 presume everybody is ready to go?

6 MR. VARON: Yes, Your Honor.

7 MR. FELMLY: We are, Your Honor.

8 THE COURT: We've got some motions outstanding. I
9 think probably we can dispose of them as we come to them
10 during the trial. I received the plaintiff's opposition to
11 defendant's motion in limine to exclude plaintiff's proposed
12 Exhibits 196 and 197. I received that today, this morning,
13 and that's the first time I had seen Judge Barbadoro's order.

14 I'll have to study it a little bit. Quite frankly, I hate
15 to admit it, but I really was not familiar with Rule 803(16),
16 I never have had that come up in a case. I'm familiar with
17 the ancient documents authentication under Rule 901. We had
18 that way back in the asbestos cases. But as far as the
19 hearsay aspect of it, I really was not -- Is that a new rule
20 or something relatively new? Has it been around a long time?

21 MR. FELMLY: I think it's been around awhile, but I
22 don't think it comes up all the time.

23 THE COURT: I've never had it come up, quite frankly.
24 Okay. If you'd like to make an opening statement, I think I'm
25 generally familiar with your facts, but if you'd like to make

1 an opening statement, I'll let you do it. I don't want you to
2 make a real long one, but if you'd like to put it in a
3 nutshell and tell me how you plan to present your case, maybe
4 it might help me understand it a little better.

5 MR. FELMLY: Shall I proceed, Your Honor?

6 THE COURT: Let me see what the clerk has.

7 (Discussion held off the record.)

8 MR. FELMLY: May it please the Court, my name is
9 Bruce Felmly, and together with Attorney Beth Partlow, Kate
10 Vaughn and Barry Needleman, we are the attorneys that
11 represent SCE&G, which is the plaintiff in this matter. There
12 are also representatives from the company in the courtroom
13 this morning. Stuckey Stodemeyer, Thomas Effinger and Counsel
14 Hagood Hamilton.

15 As the Court knows, this is an action brought under
16 Section 107 of CERCLA, seeking response costs for the
17 Charleston South Carolina MGP cleanup.

18 For the past 16 years, SCE&G has taken the lead in
19 organizing and performing that cleanup, and has incurred over
20 \$48 million. This action seeks to hold UGI joint and
21 severally liable for the response costs incurred in cleaning
22 up the site.

23 Now, I'm going to be using some of the exhibits that have
24 been marked, and these are all without objection.

25 The Court is probably familiar with the layout here. This

1 site, this Charleston MGP operated from 1855 to 1957. During
2 that period of time approximately 21.4 billion cubic feet of
3 gas was produced. And that gas was, of course, used by the
4 people of Charleston for heating, lighting and cooking.

5 The manufacturing of gas was largely replaced in the
6 modern era when natural gas pipelines came to this region, but
7 during the historic period this was a critical process for the
8 fuel and heating needs of the city.

9 We'll be spending a fair amount of time with the Court on
10 the process of manufacturing gas and evidence on that, but it
11 essentially involves the heating or combustion of a fuel such
12 as coal or coke, commonly mixed with oil or other products, in
13 order to create the gas.

14 The by-product of that process, tar, condenses out of that
15 vapor that's been formed in the combustion, and has potential
16 to accumulate in the various vessels and piping and other
17 parts of the production process.

18 It is such a large part of the process that it's really
19 integral to the process, because the volumes and the amounts
20 of tar are huge, and really have to be dealt with by the
21 company running the manufactured gas plant.

22 In this case, it is obviously the tar that is the
23 contaminant that we're dealing with. It comes from the
24 manufactured gas plant, it is the residual or the by-product
25 that contaminates the MGP plant, and is really the target of

1 the cleanup.

2 It's estimated that during the years of the operation of
3 the Charleston MGP, approximately 14.1 million gallons of tar
4 were produced. There are various rates of production based on
5 the exact type of gas that's produced, but it runs between
6 half a gallon to a gallon per 1000 cubic feet of gas. So the
7 critical element in terms of manufacturing, and as it ties
8 into the pollution here, is going to be that the operator of
9 the manufactured gas plant is not only producing gas, but the
10 production of gas means the production of tar, that means the
11 handling of tar, the storage of tar, the sale of tar, and
12 ultimately, thinking of the technology in a historic era, the
13 leakage and some release of tar into the environment.

14 This is not a case about intentional dumping of tar.
15 SCE&G does not contend that UGI, during the period of its
16 control, was intentionally dumping tar. There were technical
17 limits on these vessels, the volumes are huge, but this is a
18 case about tar getting into the environment as a direct result
19 of the operations.

20 Now, let me just talk a little bit about the site. I know
21 the Court again is familiar with it, but let me describe and
22 show --

23 THE COURT: I'm not. I'm looking, I see the map
24 here.

25 MR. FELMLY: Let me take a little more time. We're

1 talking about an area adjacent to the Cooper River.

2 THE COURT: Reading the papers, I know it's
3 relatively close to the Aquarium.

4 MR. FELMLY: It is close to the Aquarium. And what
5 you see here in the portion of Exhibit 78 that's now being
6 displayed, we've superimposed on this superfund site, some of
7 the modern area structures that are there. So you can see
8 that down by the water, the area where the Aquarium is, where
9 the Imax theater was, and the electrical substation and the
10 parking garage. And what we have here is a manufactured gas
11 plant that was on a portion of this area, and then
12 contaminants have spread into these adjacent areas.

13 Almost all of the remediation efforts, Your Honor, involve
14 dealing with tar, either directly as a gooey black product in
15 the subsurface, or the impact that that tar has as groundwater
16 flows under the surface and comes in contact with the tar, and
17 leaches out, if that's the correct word, the contaminants in
18 the tar.

19 And over the past 16 years SCE&G has worked very closely
20 with the EPA and with South Carolina's agency, the
21 environmental agency, DHEC, in what's called a phased approach
22 to this problem.

23 The Court knows from our pretrial brief that we subpoenaed
24 Mr. Zeller from the EPA, who is the manager of that site.
25 After some procedures, we were able to get that deposition

1 videotaped last week, and you'll have that available. He's
2 the gentleman in charge of the site now from the EPA, and I
3 think the Court will be interested in his testimony.

4 The City of Charleston actually was developing this area
5 of the riverfront, particularly with respect to the Aquarium,
6 when this contamination was found, really in the late 80s.

7 And as a consequence of that, an investigation began, work
8 became underway --

9 THE COURT: What's on the property now?

10 MR. FELMLY: Pardon?

11 THE COURT: What's on the property now?

12 MR. FELMLY: Well, a variety of things. There's the
13 Aquarium is on the property, there's an electrical substation,
14 there's a parking garage, there's an area of a park. The
15 National Parks Service has a facility there where they take
16 the boats out to Fort Sumter, there's a variety of things that
17 are there.

18 But the City wanted this developed on an expedited basis.
19 You will recall that at our motion for summary judgment
20 hearing you raised the question, I think with me, over whether
21 or not the arrangements between SCE&G and the City related to
22 the bus franchise, the sale of the bus arrangement in the City
23 or the franchise for electric service. There is an
24 arrangement where my client made payments of \$24 million to
25 the City for it to do environmental cleanup. Nothing to do

1 with the bus company, nothing to do with the electric
2 franchise. There are separate agreements, you'll see them in
3 evidence, you'll hear testimony from the City witnesses and
4 from Mr. Effinger. But there certainly was a payment made for
5 the City, who wanted to work faster and quicker to take on
6 some of these obligations, and they did, and they actually
7 spent more than \$24 million. But that's a portion of our
8 claim.

9 The other aspect of it is this is a project that has been
10 ongoing this whole period and is nowhere near complete.

11 We have a statute of limitations claim that UGI has raised
12 going back to counting from when the first, you know, work was
13 done on this site. This is a site that has not been
14 finalized. Tar is being pumped out of that site as we sit
15 here today, or stand here today. This is a photo that shows
16 the kind of facilities that take the tar out. There is
17 subsurface tar under holders, there are portions of the site
18 that have yet to be developed, there are sediments in the
19 river yet to be cleaned up. There's a host of work that is
20 part of our declaratory judgment request saying that as this
21 future work goes forward, UGI should respond in the costs
22 related to that.

23 There's an issue in this case over whether the work is NCP
24 compliant, does it follow the requisites of protecting
25 workers' safety and health, does it protect the community

1 participation. All of the work, we believe, is NCP compliant,
2 and you'll hear from several witnesses on that.

3 The heart of this case, and I'm going just take a few
4 minutes on it and be very brief here, the heart of this case
5 is obviously the question of in the interval when UGI was
6 involved with the Charleston MGP, which is 1910 to 1926, did
7 it provide the requisite control, management, direction, so
8 that it is a party that has to be responsible in a joint and
9 several way. And that's a very intense factual inquiry, and
10 I'm certainly mindful the Court has seen the briefing of the
11 parties on that.

12 UGI arrived in 1910 in Charleston. Through a series of
13 transactions, it took control of the site. It described it
14 when it came to town in the organization chart that it would
15 be taking the properties over. UGI, as the Court knows, was a
16 systemized, nationwide, or at least east coast-wide
17 organization with many plants. We will be looking at that
18 issue. And we believe that it is responsible, because that
19 control was dominant, that control certainly was within
20 Bestfoods, and that it is liable.

21 UGI says, well, even if we're liable, we should allocate
22 these damages. We shouldn't be liable for the whole period.
23 And they have a burden, as you know, and if the Court accepts
24 that approach, we believe that you would find that about
25 23 percent of the gas production over the history of this

1 plant was on the UGI watch. From 1910 to 1926. And gas
2 production we think in this case is the most reliable way to
3 fairly allocate, if the Court does allocate it.

4 There are also some periods where there's nobody that is
5 currently in existence or alive as a company, so-called orphan
6 shares, and they add up to about another ten percent.

7 So there's a basis to allocate, if the Court decides to do
8 that.

9 With regard to the evidence and how we're going to present
10 our case with respect to UGI and control, it is not a
11 consultant or an adviser, it was a very eccentric, in the
12 words of Bestfoods, controlling entity that had a system, it
13 came out of Philadelphia, had many of these plants in
14 existence. In fact, in 1916 UGI had about 40 plants,
15 according to its own papers, scattered throughout the
16 Northeast and into the Midwest. By the time it got to 1930,
17 just four years after it finished in Charleston, it had about
18 71 plants. And this is right out of UGI's corporate history.
19 It referred to its operation as an empire. But this isn't a
20 case about labels, it's a case about looking at very specific
21 information about what they did on a day-to-day basis.

22 And let me tell you what our principal witnesses are going
23 to be, and just a word or two about what each of them are
24 going to say. And some of them are long witnesses. Thomas
25 Effinger will be called today as our first witness. He's the

1 person at SCE&G most responsible for the remediation, worked
2 on it day in and day out for many many years. Very familiar
3 with the locations, the nature of what's been done, the timing
4 of what's been done, and the costs that have been incurred.
5 He very specifically will discuss the timing and the fact that
6 this has been a planned, staged presentation by the agencies,
7 and an approval, and that this is not something where we've
8 sat on our hands or should be time barred, but rather, there
9 has been a step-by-step approach where we didn't even know
10 what some of the remediation steps were going to be until
11 we're well into the 2000 period.

12 There really has never been a permanent remedy
13 established. Only until very recently do we even have the
14 inkling of it. And it's not complete even today as to how
15 this site's going to be cleaned up. And you'll hear about
16 that.

17 Dr. Neil Shifrin is an environmental scientist and an
18 engineer, probably one of the people in America who has been
19 most involved in manufactured gas plants. He will discuss
20 with you the nature of the plant, how tar is produced, how it
21 is that management of a plant results in tar, what pieces of
22 equipment and what acts of UGI tie them or link them to the
23 tar and the waste that Bestfoods requires. And then bringing
24 to bear his environmental experience, will take you through
25 the information that will actually show how that tar today is

1 in the environment and what the link is to UGI's property.

2 And let me just move quickly to that, if I can. If we go
3 to the historic composite, which is, Denise, Exhibit 78, this
4 map, Your Honor, that Dr. Shrifrin has prepared, identifies
5 the site and identifies the -- in purple or lavender -- the
6 facilities that UGI had involvement with during the day, and
7 that he believes related to their work that would tie into
8 tar.

9 And in the next slide what he does, and of course you
10 cannot read the detail, but you'll get the message, he has
11 then annotated each of those pieces of equipment to identify
12 the sources of information that tie it or link it to UGI's
13 role.

14 And then in the next slide he's taken the issue of what's
15 going on in the environment. And if I can just orient to
16 this, this is sort of a cross-section, Your Honor, where on
17 the surface you see those UGI purple facilities, and then
18 using the tests and the borings and the wells that have
19 established where the contaminants are, where the tar is,
20 we're able to see the relationship of those contaminants to
21 those same facilities. And all of that is critical in terms
22 of that linkage between UGI, which is very much a part of our
23 case.

24 This tar has been fingerprinted almost like, you know, a
25 DNA thing, and we can determine within certain ranges which

1 tar was UGI and which tar may not have been UGI. So that will
2 be an important part of our case.

3 Just to finish up here quickly, two other critical
4 witnesses I want to mention. Thomas Blake is a CPA, 25 years
5 plus of audit experience, many forensic engagements, very
6 familiar with the relationships of companies, parents,
7 subsidiaries, tremendous amount of experience with regard to
8 determining what is the real substance of transactions, rather
9 than the form of documents. He has extensively reviewed the
10 records in this case, he's actually got very great experience
11 in prior cases with UGI, and he will be addressing questions
12 like whether or not UGI's statements were recommendations, or
13 in the context of those transactions, were they actually
14 directives.

15 He will go through the breadth and the depth of this. It
16 will be very detailed testimony, we've created lot of
17 summaries and composites in an effort to present a great deal
18 of information in an efficient way.

19 But just one thing, if you could bring up Exhibit 225,
20 Denise, I want the Court to understand when UGI says, well, we
21 just provide recommendations -- then if you could zoom in on
22 this through the use of our technology, when UGI met and made
23 decisions about its companies, there would commonly be, as you
24 can see here, a number of companies across the country that
25 they would make various rulings on with respect to these

1 items. And you'll see a lot of this. This is not a case
2 where they say, well, offered for the consideration of the
3 Charleston plant is maybe you should buy some steel. There
4 would be listings of their companies. And they would do them
5 in groups, and they would act in a way that's far more
6 consistent with directives than is the case with an adviser.

7 The last witness that I'll mention is Professor John
8 Macey. He is a professor at Yale. He is not here to tell you
9 the law, but he is an expert on corporate governance, he
10 understands the relationships of related companies, he has
11 tremendous experience looking at UGI, he's testified on these
12 matters. His testimony has been of aid to the Court in a
13 variety of cases. And he will focus very heavily on our veil
14 piercing claim, on the issues of whether or not this is an
15 abuse of the corporate forum and the companies that are
16 involved in it have been injured.

17 UGI plainly was a technological giant. It brought
18 technology and tremendous experience and a system to this
19 process back in the historic period. All of the people who
20 were involved in that are now gone and have been gone for many
21 years, all the leaders of UGI and the leaders in Charleston
22 are gone. But the record remains, and the interpretation of
23 it, I think, is clear.

24 And we look forward to try to bring that to life for you
25 in the courtroom using the historic record and the experts,

1 and we'll hope to do that efficiently. That's just a very
2 small thumbnail sketch, but in the time allotted, I hope
3 that's helpful.

4 Thank you.

5 MR. VARON: Good morning, Your Honor.

6 THE COURT: Morning.

7 MR. VARON: I'm Jay Varon from Foley and Lardner on
8 behalf of defendant UGI. With me at counsel table is Paul
9 Bargren from our firm; Scott Wallinger from Clawson Staubes;
10 and we have UGI representatives Tom Jackal and Michelle Bimson
11 in the courtroom as well.

12 Your Honor, not surprisingly, we have a very different
13 view of what the evidence will show, in particular as to what
14 Mr. Felmly calls the heart of the case, the so-called UGI
15 control period. And before I preview for you what our view
16 is, I think it might be worth asking for a second why the two
17 sides have such different views of a common documentary
18 record.

19 And as Your Honor hears the trial over the course of the
20 next week or so, I think these issues will come to fore.

21 First of all, as Mr. Felmly alluded, nobody is alive who
22 was watching the way UGI operated or the way CCR&L operated,
23 the subsidiary at issue, Charleston Consolidated Railway. All
24 you have is the documents. So when the experts and the
25 witnesses get up, they know only what they could have gathered

1 from the documents.

2 The issue is, what did they read? Did they read
3 everything? Was it complete? And if it was complete, did
4 they interpret it properly? Were they looking only for
5 certain issues, or did they read everything? If they read it,
6 did they understand it? And if they understood it, was their
7 analysis encumbered by making flawed assumptions or
8 inferences? Sometimes not even articulated.

9 There are lots of illustrations of this problem, but we'll
10 show one right from the outset. If we could show up
11 Exhibit 212, Defendant's Exhibit 212.

12 One of the things that plaintiffs are doing, Your Honor,
13 is focusing on, as Mr. Felmly indicated, UGI's control through
14 various sources. One of the things they claim is that UGI
15 audited the Charleston gas plant on numerous occasions. And
16 if Your Honor sees this, there are eight pages of this exhibit
17 with dozens and dozens of references of supposed audits of the
18 Charleston plant. But when you actually look at the
19 underlying documents, none of the audits were of the
20 Charleston plant, they were all of the subsidiary, Charleston
21 Consolidated Railway. If you could show an example.

22 This is from the second page, the exhibit says the
23 Charleston plant was audited, correct, for the dates, but when
24 you look at the exhibit -- maybe you can make that a little
25 bigger, Andrew -- it's not that the plant was audited, it's

1 that the following accounts of the following companies have
2 been audited and found correct. And yes, the Charleston
3 accounts were correct and UGI, as the parent, audited them.

4 Now, why does the plaintiff talk about the plant being
5 audited as opposed to the company? It's because they've made
6 an assumption in the case, Your Honor, that the plant and the
7 company are the same thing. And so when they talk about
8 things happening at the plant, they don't distinguish it from
9 the company, even though Bestfoods and its operator liability
10 section makes a clear point of saying that you have to look at
11 the activities that were conducted at the facility, and those
12 that were conducted with respect to pollution.

13 Plaintiff's case in large part is about what happened at
14 the company, and they don't necessarily articulate it. This
15 is one of -- first of all, every reference on this exhibit has
16 the same defect, talk about auditing the plant when it's the
17 company, and other exhibits are going to have this same
18 problem.

19 In addition, if you just look at the first page again,
20 you'll see that there are repeated references to the same
21 audit. They've listed seven times out of ten times on the
22 first page, that the Charleston plant was being audited, for
23 the year of 1912, and you've got eight pages of this. So
24 obviously they're exaggerating the degree to which it's
25 audited.

1 Another reason why we have different views of the
2 evidence, Your Honor, is that there will be assertions about
3 company X took a particular action.

4 THE COURT: I would rather you review your case.
5 It's inappropriate in opening statement to argue it, and
6 that's what we've got here. And the reason it's
7 inappropriate, because I don't know what evidence is going to
8 come in, first of all, and secondly, I can't understand your
9 argument until I see the evidence. So let's --

10 MR. VARON: I will move to that.

11 THE COURT: Nonjury is a lot different, granted, but
12 still, the rule is that you don't argue it, you just state in
13 general terms what your case is all about.

14 MR. VARON: Okay. Well, Your Honor, in part
15 though --

16 THE COURT: Say what now?

17 MR. VARON: Excuse me?

18 THE COURT: What did you say?

19 MR. VARON: I said -- I was just going to continue.
20 I was going to say, in part, part of our case really is trying
21 to prove a negative. Mr. Felmlly and SCE&G are here saying UGI
22 operated, UGI did this, and much of our case is trying to say
23 we didn't. It's like somebody says there are UFOs. How do
24 you disprove that? You kind of show that the evidence that
25 they're coming forward with, doesn't prove what they say. And

1 that is what a large part of our case is going to be. That
2 their evidence doesn't meet the test, and that their evidence
3 is going toward a different standard than the standard that is
4 there. But that's the point, Your Honor, and I will move on.

5 I guess the thing I'd like to show is that because they --
6 I guess the other document, the other point I really want to
7 make is, again, in a defensive posture, they don't have any
8 documents or any evidence that will show UGI managing,
9 directing, conducting disposal at the Charleston site. There
10 just are no documents.

11 They'll show you a policy about tree trimming that UGI
12 sent all the subsidiaries, but there isn't a single document
13 in the record that shows UGI conducting, managing or directing
14 these waste disposal activities. That's why they will show
15 you all kinds of other documents and the documents that you
16 will see will show, for example, as Mr. Felmly indicated, that
17 UGI was a holding company that had interests in dozens of
18 subsidiaries during this 1910 to 1926 era.

19 And, of course, Your Honor, the evidence will show that
20 there was no financial state regulatory/federal oversight of
21 investments and securities back then. So UGI invested in all
22 these companies, and they had to track and monitor their
23 investments.

24 You will see, Mr. Felmly has composite exhibit of a
25 composite exhibit about recommendations that UGI made about

1 equipment, about centralized purchasing, about charitable
2 donations, all of this in an effort to track what its
3 subsidiaries were spending and to monitor its investment.
4 Even today we find that with the sophisticated regulatory
5 oversight we have, people get defrauded even in a
6 sophisticated environment like today. UGI was acting in a
7 very prudent and rational way by following and approving and
8 recommending various expenditures for its subsidiaries to
9 make.

10 The other piece of evidence that I want to focus on, Your
11 Honor, is that you'll hear -- the closest evidence that you
12 will hear about UGI trying to direct or conduct anything about
13 waste -- this is plaintiff's theory, not mine -- they will
14 tell you about annual superintendent and employee conferences
15 that UGI held. These were professional conferences.
16 Plaintiff's theory is that these were centralized meetings
17 where UGI used them to try to instruct its employee -- the
18 employees of its various subsidiaries about how to run a gas
19 plant, how to do waste disposal. Their theory is that these
20 conferences were the vehicle for doing that. Certainly you
21 will see when you look at the UGI committee minutes, that none
22 of those minutes had anything to do with waste disposal. So
23 this is the other source of information that conceivably could
24 have been used for directing waste disposal activities.

25 And when you review them, you will find that there are

1 discussions -- and maybe you could put that waste handling
2 Exhibit up, Andrew, 158.

3 All it was, Your Honor, and plaintiffs seem to acknowledge
4 this, is that there were discussions at these conferences by
5 different local employees at subsidiaries. And you'll see
6 that plaintiff refers to discussions at superintendent
7 meetings. They weren't directives, Your Honor, it wasn't a
8 boot camp saying you will do X and Y. It was a free-wheeling
9 discussion by different local companies facing local market
10 problems, local engineering issues, reciting how they solved
11 particular problems.

12 And not only was it decentralized and free-wheeling
13 discussion, you'll find evidence that Charleston's engineer,
14 CCR&L engineers, the ones that were supposedly being led
15 around by the nose by UGI, were leading many of these
16 discussions and writing articles about important engineering
17 issues.

18 You'll see that Charleston, a guy named E.C. Kollock was
19 the one who developed a system of daily apparatus inspection
20 at the plant to inspect the equipment every day and report on
21 it. You'll see that Charleston engineers made decisions about
22 whether to increase the capacity of gas holders. You'll see
23 that there was an analysis about how to deal with the reduced
24 storage capacity at the plant and to fix it. You'll see that
25 Kollock created his own tar still in a novel way, because of

1 the poor market for tar in Charleston. All kinds of decisions
2 that UGI made independently. And so the whole notion of
3 direction and control as a result of these conferences, I
4 think, Your Honor, will be belied.

5 And in general, Your Honor, I think the whole theory that
6 plaintiffs have created here, of UGI trying to direct
7 day-to-day decisions about waste disposal from 700 miles away
8 in Philadelphia, at the end you will see doesn't make sense,
9 and also is belied by a lot of the evidence you will hear.

10 Mr. Vandeven, our environmental expert, will tell you and
11 describe how the gas making process is really a localized
12 process, and the kind of day-to-day, hour-to-hour process.
13 Mr. Vandeven, I think, will cite treatises, and he is a very
14 experienced engineer who has been in a lot of gas plant cases
15 himself. So we look forward to his testimony.

16 This notion is contradicted by the large work force you'll
17 hear about, Your Honor, at the Charleston gas plant. The
18 Charleston gas plant had dozens of their own employees,
19 foremen, superintendents, gas makers, gas makers' assistants,
20 fitters, all kinds of people who were the ones that were doing
21 the day-to-day running of the plant. And you won't find any
22 direction on how to make gas, on how to make tar, on how to
23 dispose of tar. You'll find papers that were published and
24 disseminated as best practices; that's all you'll find.

25 Another -- I want to highlight two important exhibits,

1 then I'll briefly talk about procedure, and stop, Your Honor.

2 The point about which company took action is a critical
3 one. When plaintiff says that Dr. Shrifrin is going to show
4 you these very nice maps and point to the source of the
5 equipment, he's going to be making assumptions about who
6 approved the equipment, who is responsible for the equipment,
7 who operated the equipment. And that is going to depend in
8 large part on how you view the actual employees and the people
9 involved in this matter.

10 We have two biographical exhibits that I think are going
11 to be critical to Your Honor in going forward with the trial.

12 One is 225, which is a list of biographies of all the --
13 not all, but probably most of the key personnel that you'll
14 hear about in the case. And it's indexed, you'll be able to
15 keep track of who each person is, whether they work for CCR&L,
16 whether they were a UGI person. And we have a color chart to
17 make it easier, which is Exhibit 226. And the color chart is
18 up there now, Your Honor, before you as well.

19 So you see that if somebody was a CCR&L employee, there
20 will be a green bar during the applicable time year. If they
21 were in UGI, you'll see that gold hatch thing, and if they
22 were concurrent, and there were certain employees who were
23 both officers and directors of UGI and CCR&L, you'll see the
24 blue thing. Maybe just focus on Gadsden for a second.

25 Your Honor, Philip Gadsden was a local Charleston lawyer,

1 former legislator, president of both Charleston Consolidated
2 Railway Gas and Electric, and CCR&L, the subsidiary at issue.
3 And so you can see Gadsden, beginning in 1910, was a CCR&L
4 employee, officer and director; no UGI allegiance whatsoever.
5 In 1919, the second half, he was appointed to be a UGI vice
6 president.

7 A lot of what you will hear in the case, Your Honor,
8 depends on how you view these employees. Plaintiffs will view
9 people like Mr. Gadsden, Mr. Waring, George Waring, who was
10 the general manager of CCR&L, he was a vice president, he was
11 an officer, a director. You will hear that Waring oversaw,
12 for example, the construction of the new gas plant that was
13 built in Charleston.

14 Plaintiffs will attribute Waring's supervision to UGI,
15 because Waring used to work at a different UGI company
16 previously. But key to the case, Your Honor, is when Waring
17 did something, when Mr. Kollock, who created the tar still and
18 who was a CCR&L employee and gas superintendent, did
19 something, when each of the people took action, whose action
20 was that? We submit to you it was CCR&L's action. And that
21 when Your Honor hears testimony that UGI did a particular
22 thing, you need to really ask, well, on what basis, who did
23 it? Was it a UGI person that did it, was it a CCR&L person
24 that did it? Were they wearing -- were they working for CCR&L
25 in their normal capacity? That is going to color a lot of

1 what the actions are in the case.

2 Let me just turn quickly to the procedural aspects of the
3 case, Your Honor. Again, we have a different view. It may
4 turn in part on the law rather than the facts. But
5 plaintiff's argument about the statute of limitations is that
6 there was no final remedy, there's still no final remedy
7 today, you can't start the statute of limitations. But the
8 statute of limitations that we're focused on in particular, is
9 the one that's going to affect the remedial activity at the
10 site that began in 1998 or 1999. And the statute of
11 limitations that governs that particular activity, remediation
12 activity, is triggered by the beginning of onsite construction
13 that's consistent with a permanent remedy.

14 That activity, in other words, in 1998, the EPA issued a
15 Record of Decision, a ROD, that evaluated the various remedial
16 actions that could occur at the plant. And it was targeting
17 the problems that it saw, which were basically that there was
18 tar on the -- at the site and needed to be extracted. And
19 they evaluated the different remedies, came up with -- you'll
20 see it -- 120-page document about what the remedy was going to
21 be, and then everybody started cleaning up the site in
22 connection with that ROD. They began to extract the tar, they
23 monitored groundwater, they did all the remediation activity.
24 That statute of limitations started running in '98 and '99,
25 and required suit to be filed within six years. Suit wasn't

1 filed until late 2006; it should have been filed no later than
2 2005; and we think that that action is time barred.

3 The notion that you would never have the statute of
4 limitations begin when -- especially when it focuses on the
5 trigger being the initiation of onsite construction just
6 doesn't make any sense. And I don't want to argue the law,
7 Your Honor, but I think you'll see that the cases support
8 this.

9 The other comment I'll make about the procedure is that
10 this \$26 million payment to the City is, I think, improper for
11 a variety of reasons. I mean, first of all, the only way it
12 can be brought before Your Honor is as a contribution claim.
13 We don't think it's a valid contribution claim, but if it was,
14 it would be based on conduct that occurred in '96 or '93
15 order, and it would be time barred. And finally, most of the
16 money was not spent on environmental activity. You will hear
17 evidence that, you know, some of it was spent to build a
18 tunnel and a wall that was helpful, but none of that work was
19 supervised by the EPA, none of it was done pursuant to a
20 Record of Decision.

21 THE COURT: This is all argument.

22 MR. VARON: Well, Your Honor, it's -- I think it's
23 evidence, and this is what you're going to hear.

24 THE COURT: No, it's purely argument. You're going
25 to be making the same arguments at the conclusion of the case.

THOMAS EFFINGER - DIRECT EXAMINATION

1 And I just -- it doesn't help me to hear the evidence to
2 receive those arguments twice.

3 MR. VARON: Okay. I think that I've essentially
4 said --

5 THE COURT: And it may be that this is the type case
6 where you don't have an opening statement to make. Maybe it
7 is all the credibility of the plaintiff's case. If that's the
8 case, then we'll get to it.

9 MR. VARON: I will say a lot of our case is
10 defensive.

11 THE COURT: I understand that.

12 MR. VARON: Thank you, Your Honor.

13 THE COURT: Call your first witness.

14 MR. FELMLY: Thank you, Your Honor, plaintiff will
15 call Thomas Effinger. Mr. Effinger, can you come forward.

16 THE CLERK: State your full name.

17 A. Thomas N. Effinger.

18 THOMAS EFFINGER, a witness called by the plaintiff, first
19 having been duly sworn, testified as follows:

20 DIRECT EXAMINATION

21 BY MR. FELMLY:

22 Q. Good morning, sir.

23 A. Good morning.

24 Q. Would you please state your full name and your business
25 address for the record?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. Thomas N. Effinger, and my office is at 6248 Bush River
2 Road in Columbia, South Carolina.

3 Q. And what is your occupation, Mr. Effinger?

4 A. I am a manager of the corporate environmental services
5 department at SCANA.

6 Q. And what is SCANA?

7 A. SCANA is the holding company for South Carolina Electric
8 and Gas, SCE&G, and several other subsidiaries. So SCANA
9 would be the corporate holding company.

10 Q. So in terms of your position then, your corporate
11 managerial environmental position, who is it that you provide
12 services to within your holding company setup?

13 A. Within the holding company, our environmental services
14 group acts as an internal consultant to the subsidiaries,
15 throughout the companies, and SCE&G gas operations is one of
16 those customers. And that's where we provide the service of
17 doing turnkey work at these manufactured gas plants sites and
18 doing -- conducting the remediation.

19 Q. So can you describe for the Court, for the benefit of the
20 Court, what your principal responsibilities and day-to-day
21 activities are in connection with your job as a environmental
22 manager?

23 A. Currently I have responsibilities not only with the gas
24 folks, we have a gas company in North Carolina, PSNC, I also
25 provide permitting and licensing, oversight, my group does for

THOMAS EFFINGER - DIRECT EXAMINATION

1 the generation folks, and they're the ones that generate the
2 electricity. We have a pipeline company. So there's a lot of
3 compliance, permitting and remediation services that we
4 provide.

5 Q. And do you do that alone or do you have a team of people
6 that work with you or under you?

7 A. I have a team of folks that work for me. I've got five
8 direct reports, and I believe I'm at 13 total in that chain.

9 Q. Now, to what extent do your duties involving environmental
10 management relate to SCE&G's MGP plant or these legacy MGP
11 plants from the historic era?

12 A. It's a great deal of work. Currently I have another
13 person who has accountability for that, but back in the day
14 when all of this remediation, when all of this cleanup work
15 was going on in Charleston, there was a very healthy chunk of
16 time devoted to it, something on the order of 70 percent,
17 depending upon what phase the project was in.

18 Q. Would that be 70 percent of -- on average, of your time,
19 would you say?

20 A. Yes, sir.

21 Q. And how many manufactured gas plant sites do you have that
22 you have been administering or remediating?

23 A. We have four in South Carolina that we're working with,
24 and those are under SCE&G. There's also seven in North
25 Carolina that are PSNC's responsibility. We have split four

THOMAS EFFINGER - DIRECT EXAMINATION

1 of those with Progress Energy, so we're effectively managing
2 five in North Carolina.

3 Q. And could you describe for the judge your role in
4 Charleston? To what extent have you had responsibility over
5 the Charleston MGP, which is obviously the subject of this
6 action.

7 A. Right. Charleston's been going on for a long time. My
8 involvement started about the mid 90s, and it became more
9 involved as the project manager who was working for me at the
10 time had open-heart surgery. So I got more directly involved
11 in the late 90s with it. And that's continued through today.
12 And it's been a constant dealing with the agencies and
13 managing the work on site.

14 Q. So from approximately what year have you been the person
15 for SCE&G that has been the manager or the point person on the
16 Charleston cleanup?

17 A. About '94 or '95 through present.

18 Q. And in terms of your responsibilities in that interval,
19 and while it may have gone up and down a little bit in terms
20 of your workload, have you stayed involved continuously in
21 that process?

22 A. I have stayed involved continuously, yes, sir.

23 Q. Is there anybody at SCE&G that you're aware of that would
24 have more information about the Charleston MGP site from the
25 company point of view, other than you?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. No, sir.

2 Q. Can you provide the Court just a brief background of what
3 your education and training is to be handling these
4 responsibilities and duties?

5 A. I got a chemistry degree from Duke University, started
6 working, went back to school part-time and got a chemical
7 engineering degree from the University of South Carolina.
8 Beyond that, there's been lots of training in the
9 environmental area dealing with everything from asbestos,
10 USTs, oil spills, lead paint abatement, all of those kinds of
11 activities. So --

12 Q. In terms of your engineering experience and your chemical
13 engineering degree, have you gone on to become certified or
14 licensed in any way as an engineer?

15 A. Yes, I have professional engineering registration in both
16 South Carolina and North Carolina.

17 Q. How long has the total period of your employment been at
18 SCE&G, or the parent company, SCANA?

19 A. Come this August, it will be 28 years.

20 Q. And prior to taking on the environmental site management
21 job, did you have other positions at SCANA or at SCE&G?

22 A. Yes, sir, for the first ten years at SCE&G I worked in
23 design engineering for the nuclear plant, the V.C. Summer
24 nuclear station at Jenkinsville.

25 Q. And before you came to SCE&G at all, did you have any

THOMAS EFFINGER - DIRECT EXAMINATION

1 technical or engineering jobs at other companies?

2 A. Yes, sir, when I first got out of school with the
3 chemistry degree, I started working at RCA Records in the area
4 of research and developments. Then when recession hit in
5 about 1979, I left and came to South Carolina and worked at
6 Anchor Continental in the adhesive recovery area doing
7 research and development and improvements for toluene
8 recovery, for solvent recovery.

9 Q. Now, let me turn our attention, Mr. Effinger, to the
10 Charleston MGP site, and I obviously addressed some of this in
11 the remarks I made to the Court before. But in terms of the
12 location of this site -- and we're putting up a portion of
13 Exhibit 78, which is a map or an aerial -- can you orient the
14 Court by using the photograph here and the ones that I'll be
15 showing you in a moment, as to where the area of this is in
16 connection with the Charleston peninsula?

17 A. Yes, sir, it's located on the east bank on the Cooper
18 River. And you can see that light blue area, it started out
19 being about 18 acres and grew to be about a 30-acre site.
20 Right there on the Cooper River.

21 MR. FELMLY: If you can bring up the next photograph,
22 Denise.

23 Q. Again, this is from Exhibit 78. What does this picture
24 depict? Obviously it's labeled former MGP site. Maybe you
25 can explain to the Court what we're seeing here in terms of

THOMAS EFFINGER - DIRECT EXAMINATION

1 major structures.

2 A. Yes, sir. At the foreground you see the almost house
3 book -- house boat-looking structure, that's the South
4 Carolina Aquarium. And to the left of that is the Fort Sumter
5 tour boat facility. Behind those two structures going west is
6 the Liberty Square, and then diagonal and upgradient from that
7 is our electric substation where most of the former MGP
8 structures were located.

9 Q. The area that is shaded in the sort of aqua or light blue
10 and labeled former MGP site, did the site cover the entirety,
11 did the manufactured gas plant that was there in the historic
12 day, did it cover all of that area?

13 A. No, it did not. It was mostly back on the electric
14 substation. And then the Imax theater that you pointed out in
15 opening, was a former steam plant, and it's been converted to
16 the Imax theater, which is now closed. So those were the main
17 structures in the day. But even before that the water, the
18 Cooper River shoreline was actually further inland than what
19 it is shown now.

20 MR. FELMLY: Let's bring up the next photo, Denise.

21 Q. We saw this again earlier. Using the same -- obviously
22 this is now from above -- does this, called ROD site
23 definition, does this describe the area from Exhibit 78 that
24 shows how modern structures are positioned on top of an aerial
25 photo?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. Yes, it does. You can see the electric substation and
2 the -- I think later on we have slides that show that gas
3 holder in the northwest corner of that. You've got the
4 parking garage, the National Park Service and the South
5 Carolina Aquarium. And those are bounded by Calhoun Street
6 towards the bottom, Concord Street, Charlotte Street and
7 Washington Street. And then the cross-hatched areas out of
8 that are the much bigger areas where we had to do a lot of our
9 investigation, groundwater measurements, sampling and
10 analysis. So those are all part of the site as well.

11 Q. Now, is this area a federal superfund site?

12 A. Yes, it is.

13 Q. And what's the name that EPA has given to this site?

14 A. They've called it several names. Typically they refer to
15 it as a Calhoun Park area site. They've also called it the
16 Charleston Manufactured Gas Plant site.

17 Q. Is the former footprint of the old Charleston manufactured
18 gas plant that operated there historically, identical in the
19 footprint of the size of the superfund site?

20 A. The size of the superfund site is much bigger, because it
21 includes the surrounding areas which may have been impacted by
22 operations at the footprint itself. The electric substation
23 is something on the order of four acres. Initially they
24 classified it as being 18 acres, and you see later on that
25 grew to about 30 acres.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. So if I understand what you're saying, where we see the
2 label in the left center of the picture, electrical
3 substation, are you saying that's where most of the gas plant
4 buildings and structures were?

5 A. That's where most of them were, and then you've got that
6 Imax theater, which was also the former steam plant.

7 Q. And to what extent has it been determined that
8 contaminants from that original structure, the gas plant, have
9 moved or there have been plumes of contaminants that have
10 moved out from the original location?

11 A. There's tar in various locations of the site, and I
12 believe we'll get to that later on. But also the dissolve
13 phase. As the groundwater flows through the tar that's
14 subsurface, it picks up some of those contaminants, and the
15 general direction is southeast towards the Cooper River. So
16 it's flowing towards the property that the Aquarium is on, and
17 towards the National Park Service property. So it flows to
18 the southeast.

19 There were also some other structures that facilitated
20 some of the releases, an old brick archway, and I think we'll
21 be talking about that later. And that discharged into the
22 Cooper River. And then later on as we were doing the
23 investigation, we found out about -- we had another seep
24 occurred at the end of Charlotte Street. So that's generally
25 where the contaminants emanated from.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. When this plant -- well, I don't know that I've asked you
2 this. This plant began operating, based on the history you've
3 obtained, in about what year?

4 A. 1855.

5 Q. And in 1855 when the plant first began to operate, was the
6 configuration or the proximity to the Cooper River the same as
7 it is today in terms of where the banks and areas which are
8 the margin of the river are?

9 A. Well, there was a lot of stream channels and drainage
10 areas that came all the way up to Concord Street, and the gas
11 holder itself was up in that northwest corner. It appears to
12 have been there for a reason. Looking at old maps, that
13 appears to have been the predominant high ground. Compared to
14 the marshy areas.

15 MR. FELMLY: Let me bring up Exhibit 21, Denise, if
16 you'd do that for me.

17 Q. And this is a document that -- why don't I ask you. What
18 is the document that we're bringing up the cover sheet up is
19 Exhibit 21 that the Court will have available to it?

20 A. Later on we commissioned a company to look at the land use
21 history and to examine what happened to the property over the
22 years. And this was for discussions later on with the folks
23 over at the Park Service and the Department of Justice. But
24 we were examining what the shoreline and how it was added to
25 over the years. So this company did that work for us, TRC.

THOMAS EFFINGER - DIRECT EXAMINATION

1 MR. FELMLY: And, Denise, if could you tick into
2 this --

3 Q. I'm certainly not going to touch on every page of this
4 report, but does this contain old maps and old drawings that
5 show at various points in history where the manufactured gas
6 plant was in relation to the prior shorelines or these creeks
7 that you were talking about?

8 A. There -- it shows the shoreline and where a lot of the
9 docks and piers and shipyards and that kind of industrial
10 activity was taking place. And it shows how the shoreline
11 actually came further inland all the way up, almost all the
12 way up to Washington Street back in the 1700s. This one is a
13 little fuzzy, but I think some of the later ones actually have
14 the gas holder spotted into the --

15 Q. But there is -- I gather what you're saying is there is
16 available report -- we've marked it all in evidence -- that
17 sort of outlines what the history was during the very early
18 years when there was dredging and filling going on?

19 A. Yes, sir.

20 Q. Okay. Let me just move to Exhibit 26 and ask you to take
21 a look at that, Mr. Effinger. Just go ahead to that exhibit
22 there.

23 MR. FELMLY: And, Denise, maybe you can zoom that up
24 a bit for us so that we can get a better look at it.

25 Q. This document is from MTR, an MTR record, and it's called

THOMAS EFFINGER - DIRECT EXAMINATION

1 a conceptual site model. Do you know what this is or can you
2 tell me what this is?

3 A. Yes, sir, it is a conceptual site model, and this one
4 deals with shallow groundwater, the surficial zone, which is
5 three feet down to ten or 15 feet. And it shows the former
6 gas holder features above grade, but -- it's hard to see it in
7 black and white -- but then it represents how those
8 contaminants leaked into the ground, sat there in the ground,
9 and through the leaching process that you mentioned, released
10 constituents into the groundwater.

11 MR. FELMLY: So, Denise, if you could focus in the
12 area where it says former gas holder area, and see if you
13 could bring that up more closely so that Mr. Effinger can look
14 on it.

15 Q. This drawing, if I understand what you're saying, sort of
16 recreates historically what was there in terms of structures?

17 A. Yes, sir, it does.

18 Q. And then it takes it and examines what the subsurface
19 under those areas now consists of in terms of contaminants?

20 A. Yes, it does.

21 Q. And for what purpose was this done and who did this
22 analysis as part of this remediation?

23 A. Our contractors management and technical resources put
24 this document together based upon the investigation that we
25 had done, and knowledge of how the gas plants would typically

THOMAS EFFINGER - DIRECT EXAMINATION

1 operate. And so we could tie a lot of that tar contamination
2 to the above-grade features, and show how they would have
3 gotten into the ground and led to groundwater contamination
4 issues.

5 Q. Now, were you able to find or did your company find, as
6 part of your work here, some old photos that actually showed
7 the gas plant operating in the -- essentially the relevant
8 time frame around 1910 or 1911?

9 A. Yes, sir, we did.

10 Q. This is Exhibit 78 again. Let me first ask you, is this
11 one the photos that you found, and if so, can you tell us what
12 the labeling or the information you found with this photo
13 indicated as to what circa of time it was taken?

14 A. Yes, sir, we found this in our company archives, and it
15 referred to a picture of the structure after the great storm
16 of August 1911. So we're tying this to the 1911 time frame.
17 It's actually shot from on top of that steam plant. And
18 you're looking west. So you're facing the plant from the
19 Cooper River side of the features.

20 Q. Looking inland?

21 A. Looking inland, yes, sir.

22 Q. Now, when you found it, I'm assuming it didn't have all
23 these labels that have been put on, and Dr. Shrifrin will be
24 talking about these features. But I'm assuming the original
25 photo didn't have the labels on it, is that right?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. No, sir, it did not.

2 Q. Let me just ask the next photo to be brought up. Was this
3 another one of the photos that was found at that time that
4 related to that 1911 period?

5 A. Yes, it was.

6 Q. And this, at least labeled as showing the gas holder
7 together with the purifier chips and purifier tanks --

8 MR. FELMLY: And let me ask that the third photo
9 historic from 1911 be brought up.

10 Q. And this shows the generator house and some of the tanks
11 that were there, including some of the tar tanks that were
12 kept there, is that right?

13 A. Yes, sir.

14 Q. The years of operation of the plant began in 1855, and
15 when did the plant cease to make gas or stop making gas?

16 A. There was a transition period, but it was about 1957,
17 according to the record, when they stopped making gas.

18 Q. And what's been the brief description of the use of the
19 property since it stopped making gas in the period around
20 1957?

21 A. Immediately thereafter, I believe it was used for natural
22 gas and propane storage and operations, gas operations took
23 place there. Later on in the late 70s, the electric
24 substation was built, and it's still there today, and it's one
25 of the major electric substations for Charleston and the

THOMAS EFFINGER - DIRECT EXAMINATION

1 outlying areas. So --

2 Q. Now, what I would like to do, Mr. Effinger, is turn to the
3 discovery and the initial efforts that took place with regard
4 to the contamination at the site. Can you tell the Court what
5 your understanding is as to when the tar contamination in this
6 region of the city was first discovered and what were the
7 circumstances of that?

8 A. Yes, sir. As the City started focusing on this area for
9 redevelopment, and particularly with the Aquarium, and the
10 mayor was real big on that, from talking with folks and from
11 reading the record, they went out there and they were doing
12 their sampling and analysis, looking at a storm sewer vortex,
13 and observed the tar. We had already seen the tar back when
14 we built the substation, but folks looked -- pulled out the
15 old Sanborn maps and looked at the features that were there,
16 and came to the realization that this was a manufactured gas
17 plant site and needed to be managed. And that was about in
18 the late 80, I believe.

19 Q. We're going to be hearing something more about Sanborn
20 maps, maybe it's a good time to have you explain, what are
21 Sanborn maps and how are they used or how are they important
22 in terms of looking for the location of historic structures?

23 A. Right. Sanborn maps were created as a way for insurance
24 companies to keep up with the equipment and features that a
25 company owned, and they would record the information at that

THOMAS EFFINGER - DIRECT EXAMINATION

1 time. And those maps have -- if they could be found, are
2 pretty good representations of the equipment that was present
3 at the time.

4 Q. And are they -- have they been found available for the
5 historic period relating to the Charleston MGP?

6 A. Yes, sir, for over several years. Several separate years.
7 There were several different Sanborn maps, and you can see how
8 the site has changed and progressed over the years.

9 Q. Now, after the work that the City was commissioning for
10 the Aquarium brought the presence of tar to the attention of
11 agencies, what were the next steps in terms of various
12 agencies getting involved to deal with the problem?

13 A. Well, the EPA -- well, DHEC, I guess, was the first one
14 that got involved. Then, as well as back then it was Coastal
15 Zone Management folks, the Army Corps of Engineers, and they
16 looked at the issue the manufactured gas plant sites. They
17 were nervous about dealing with it, because of the complexity
18 of the sites. And they quickly brought in EPA. There was a
19 lot of discussion about how to -- how to manage the cleanup,
20 but also allow the development to go forward.

21 SCE&G offered to the City and to the folks, let us do the
22 cleanup before you start building on the sites, we want to get
23 the cleanup done right. Once you put your structures there,
24 we're not going to get an opportunity to go back and do the
25 cleanup right.

THOMAS EFFINGER - DIRECT EXAMINATION

1 But as you mentioned earlier, the City was anxious to get
2 their development work going, and there were agreements worked
3 out on how to manage that.

4 Q. I think that this is the first time anybody has mentioned
5 DHEC. Just so the record is clear, we'll call it DHEC from
6 now on, but from -- what's the proper formal name of that
7 acronym?

8 A. DHEC actually stands for the South Carolina Department of
9 Health and Environmental Control.

10 Q. And that's been one of the agencies that you've
11 coordinated and cooperated with on the cleanup of this site?

12 A. Yes, sir.

13 Q. What is the agency that actually became the prime or lead
14 agency on the Calhoun Park superfund area?

15 A. DHEC -- well, South Carolina DHEC did some work on the
16 site. They had investigative studies. There were also other
17 consultants hired by the City to do studies. We did some
18 studies on soil and groundwater. But then that site was
19 turned over to the Environmental Protection Agency to be the
20 lead agency, and under the superfund program.

21 Q. And in terms of from the time you became involved in
22 the -- I guess the mid 1990s period, at least intensively,
23 were you the person at South Carolina SCE&G that was most
24 responsible as the lead person for your company?

25 A. Starting about '94, '95, yes, sir.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. And in terms of the interaction that you had with the EPA,
2 can you describe for me the extent or the general description
3 of what that communication and cooperation has been? And I do
4 mean in general terms.

5 A. Well, our communication has been direct, all methods,
6 either formal correspondence, e-mail, telephone calls to
7 discuss the issues as they come up and how best to manage
8 those issues and what EPA is expecting to see next.

9 Q. And in terms of the EPA representatives, has there been
10 one individual that you've dealt with, or have there been a
11 number of people who have come through in various positions?

12 A. There has been several folks come through as the regional
13 project manager who -- and they have the responsibility for
14 the site. I think we've been through four of them. There's
15 also been on-scene coordinators that were named, and I know of
16 at least one of them. So there's been several folks come
17 through.

18 Q. The current EPA manager of the site, his name is what,
19 what's that person's name?

20 A. Current EPA manager is Craig Zeller. And he is out of
21 Atlanta, region four in Atlanta has responsibility for this
22 area.

23 Q. And that's the gentleman that I deposed the other day in
24 Atlanta?

25 A. Yes, sir.

THOMAS EFFINGER - DIRECT EXAMINATION

1 MR. FELMLY: And the Court will have his video.

2 Q. Who were the other EPA managers that -- in this period of
3 time since the early or mid 90s, that you've had dealings
4 with, what were the names -- their names will come up.

5 A. Yes, sir. Originally it was Bernie Hayes, Rutheford B.
6 Hayes, called him Bernie. The second guy to come through was
7 Terry Tanner. And then there was Ken Lucas prior to Craig
8 Zeller now being the regional project manager.

9 Q. And just to give the Court a sense of the frequency or
10 extent of contact between you, as the responsible party
11 cleaning up the site and that representative role, and these
12 agency representatives, how often would you be in touch with
13 them during the course of the work on this cleanup over these
14 many years?

15 A. There was quite a bit of contact initially. And
16 especially when work was going on at the site. It would be
17 almost daily. EPA and the State and other regulators would be
18 there to come on site and inspect the work that was going on,
19 to talk to us about what we needed to be doing and how we
20 needed to be doing it, and making sure that we fulfilled the
21 obligations that they had required to us do.

22 Q. And when they do that, I know your office is up in
23 Columbia area, to what extent would you actually be on the
24 site and have occasion to meet them?

25 A. I did quite a bit of traveling to Charleston and staying

THOMAS EFFINGER - DIRECT EXAMINATION

1 in town in Charleston as that work was going on. And
2 particularly when the regulators were going to be on site.

3 Q. Would they also have to tell you that they were coming on
4 site, or do they have the power to just sort of show up?

5 A. They have the power to show up at any time unannounced. A
6 lot of cases, if they had another objective, they would let us
7 know so that we could go ahead and meet and discuss other
8 objectives or other issues that they wanted to get resolved.

9 Q. And apart from the site visits, what about the level of
10 telephone conferences, how often would you find yourself
11 talking with -- I realize it was a series of these project
12 managers -- but how often, if you give the Court a sense of
13 the contact you're having with the EPA, how often would you
14 talk with them on the phone?

15 A. Frequently. It could be on a daily basis. They would
16 also direct us to talk with DHEC, South Carolina DHEC about
17 their issues, and other regulators that would be involved in
18 this site. U.S. Fish and Wildlife, Army Corps of Engineers,
19 Office of Coastal Resource Management, OCRM. So there was
20 very frequent telephone communications.

21 Q. Now, one of the issues that UGI has raised in criticism of
22 some aspect of the cleanup involves the amount of excavation
23 that your company did of impacted source material. And in
24 terms of those terms, let's first get some terms out here,
25 impacted source material as that's used in documents and

THOMAS EFFINGER - DIRECT EXAMINATION

1 things related to the cleanup, means what?

2 A. Well, when we talk about source material, we're primarily
3 talking about the tar. And the tar would be the main
4 component that would release the constituents in the
5 groundwater. So if you have -- if you have a candle that
6 burns, it would be the wax. And the wax is there for the
7 burning to take place. Without the tar as the source, then
8 you don't have these constituents going in groundwater. So
9 we're talking about tar.

10 Q. So if you're excavating source materials, obviously
11 there's some sort of digging in the ground, and what is that
12 material going to look like to somebody like me who is a
13 layperson? What are we talking with?

14 A. When we're excavating source material, we're removing the
15 tar, and the soil is there incidental to that. So the soil
16 would actually be stained with the tar, to be in very thick
17 and gooey and dripping with tar, anywhere in between. So that
18 would be the source material.

19 Q. Now, when you did the removal or the excavation of source
20 material, tar, gooed-up soil, if that's the right word, but
21 tar-impacted soils, to what extent would the EPA
22 representatives be commonly present on the site and
23 participate in oversight of that?

24 A. They would typically be there to observe firsthand how
25 much we had removed, and to make sure that we got down to that

THOMAS EFFINGER - DIRECT EXAMINATION

1 clay layer, which was kind of a confining layer. That clay
2 would stop the tar migration from going deeper vertically.
3 And so EPA would be there to make sure that they could see a
4 clean clay surface before we backfilled that excavation. So
5 they made sure that we removed the soil that had the tar, and
6 sometimes they'd ask us to remove more soil, they felt like we
7 needed to do more removal. So --

8 Q. Now, I know you didn't probably keep track of exactly how
9 many days, or at least probably don't remember how many days
10 there was source material excavation, but did that happen on a
11 lot of occasions on this site?

12 A. It happened over the course of about two years.

13 Q. And in terms of the likelihood or the frequency with which
14 EPA was there, was their presence during soil excavation more
15 common than not?

16 A. Yes, it was. And they would ask us to call them and let
17 them know when the soil excavation was taking place, so that
18 if they could work it out with their schedule, they would be
19 there to observe it firsthand. After awhile we developed a
20 rapport with the EPA and they would trust us, but then they
21 would also come on site, do the spot checks and come to see
22 the work that was going on whenever they had the chance to do
23 that.

24 Q. Now, just in terms of this discussion about how much soil
25 would be removed, and you mentioned that sometimes they would

THOMAS EFFINGER - DIRECT EXAMINATION

1 say take out a little bit more. If could you describe for us
2 as an environmental expert in the sense of a manager who
3 handles this construction, how do you determine when you've
4 got an excavation open and you're taking out tar-impacted
5 soils, how do you determine where you're going to stop the
6 excavation? What are the practical tests or evidence that you
7 use?

8 A. Right. We try to get as much of the information as we can
9 beforehand, and more or less predetermine the area that's
10 going to be excavated. But, of course, when you're there
11 digging it out with a trackhoe, that's when you see the real
12 picture. What you use is this process called geoprobes,
13 little two-inch holes that you punch in the ground to see
14 where there's tar in the subsurface. So you're using a one-
15 dimensional tool to try to get a three-dimensional picture
16 what's going on below grade. And that's pretty difficult. So
17 we would go out there and punch these holes, and we focus on
18 an area where we knew the tar was, and then move out from
19 those with those one-dimensional soil borings to see where the
20 tar was and where it wasn't.

21 We got out to an area where it wasn't, then we had
22 predefined the area to be excavated, and then that was in our
23 work plan submitted to the regulators to say, all right, this
24 is the area where we're going to dig.

25 Of course, as we went out there and did the digging, we

THOMAS EFFINGER - DIRECT EXAMINATION

1 also had the contingency that we would dig more as dictated by
2 what we see as we remove the soil.

3 So when that backhoe digs out the area, that's when you
4 see what's going on subgrade, and that's when you get the best
5 picture what's going on. And you can see the staining of the
6 soil, you can see where the clay layer is, and so you have a
7 pretty good visual representation of what's going on.

8 Q. So you would have done some testing with these probes that
9 would be picking up tar and telling you if there's tar in the
10 subsurface, right?

11 A. Right, and we would analyze it then. The problem is, as
12 you're doing the excavation, you don't have time to wait for
13 analytical results to come back. So by doing the soil borings
14 in advance of the excavation, we would get an analysis of
15 what's in the soil, and a certain parts per million
16 concentration that tells us it's either clean or it's not
17 clean. But then we would follow that up with the visual as we
18 did the digging.

19 Q. Now, part of what you described to us was that after you
20 do the probes, there's a work plan that's prepared that
21 somehow describes the area you're going to dig; did I get that
22 right?

23 A. Yes, sir.

24 Q. Can you describe again what the function is of the work
25 plan and how the work plan then is communicated, if at all, to

THOMAS EFFINGER - DIRECT EXAMINATION

1 the regulator.

2 A. Okay. The work plan was submitted, but the intent of it
3 is to identify how we've delineated the area to be excavated,
4 and we ended up breaking the site into six separate areas that
5 needed to be managed. But starting with that Luden's area
6 alongside Charlotte Street, we told them, all right, here's
7 how we're going to delineate the area, here's what these
8 results have shown us, so here's the area of the excavation.

9 It also talked about how we were going to conduct the
10 excavation, where we were going to send the soil, how we were
11 going to manage the water, how we were going to protect the
12 health and safety of the construction workers during the work,
13 how we were going to monitor air, all of those things that are
14 required as you do that kind of work.

15 Q. That's in the work plan?

16 A. Yes, sir.

17 Q. And that's to them, to the regulator, before you start
18 doing the digging?

19 A. Yes, sir.

20 Q. And so now you've done all that and you've got it
21 delineated and you start doing the excavation, and you're
22 looking at the soils, and what happens if you see there's
23 tarry, gooey soil that's outside the area of the delineation?
24 In other words, the area of impacted soils that's bigger than
25 what your probing led you to believe it would be?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. Then we would have to remove those areas as well. You
2 have to understand that in Charleston, as you get below
3 three feet, now you're into a groundwater saturated zone. So
4 a lot of times we had to manage water in that excavation, too.
5 So that it would be in the dry. And as you're digging, you
6 could see that clay surface. We'd have to get the water out,
7 manage that through a filtration system and release it
8 properly, so that we could see those areas. But if the
9 sidewall showed more tar, and sometimes you would -- you would
10 open up an old feature, maybe a wooden retaining wall along
11 Charlotte Street, and some tar would ooze out, we'd have to go
12 clean that up, too. And you wouldn't necessarily see that
13 with your soil borings, because that wooden wall would still
14 be in place, and maybe you've got on the down -- the side of
15 it on the opposite side of what it was holding back. But as
16 we disturbed it, then the tar would come out. So you'd have
17 to clean that up, remove that, too.

18 Q. So in that situation, in that example that I just gave
19 you, if you find more tar, and it's a bigger area than
20 originally delineated, and the EPA representatives are on the
21 site, as you indicated they commonly may be, is there
22 discussion between them and you as to what's going to be done?

23 A. Yes, sir, there would be.

24 Q. And what would be the nature in terms of responding to
25 this situation, what would be the topic that needs to be

THOMAS EFFINGER - DIRECT EXAMINATION

1 addressed?

2 A. Well, digging more, you know, the EPA guy would -- Terry
3 Tanner would come over and say, Tom, I think you need to dig
4 some more over here. And so that's what we would ask the
5 trackhoe operator to do, remove more of that, move more of
6 that tar, that impacted material, and then we'd manage it.

7 Q. It's probably obvious, but in terms of the removal of this
8 impacted material, how important is that to the remediation
9 process that you are in the throws of completing? I mean,
10 what's the significance, if we can be clear on it, of getting
11 that tar out of the ground down that -- in that area where
12 it's coming in contact with groundwater?

13 A. Yes, sir. It's critically important to remove the tar.
14 That is the source of the dissolved base contaminant plume.
15 And it's -- to go back to the candle analogy, it's like
16 removing the wax from a candle. The more wax that you get
17 out, the less that candle's going to burn and cause an issue.
18 So it's critically important to remove that tar. And the
19 agencies recognized it as being critically important.

20 Q. Now, this question really goes to your personal
21 recollection as being the manager on the spot for your company
22 when these kinds of incidents occurred. Did you have
23 experiences yourself where you were there where sort of
24 hypothetical we've been talking about occurred, namely, you
25 found tar in the excavation beyond the area that had

THOMAS EFFINGER - DIRECT EXAMINATION

1 originally been delineated, and a decision was made to take
2 out more of that impacted source material?

3 A. Yes, sir. Typically where we get the real gushers would
4 be if there was a palm tree that was buried, you know, it
5 would have a lot of this stuff soaked into it, and we'd have
6 to remove it. If there was an oyster bed that we'd uncover,
7 it would be kind of -- just be lying in there with those
8 oyster shells. If there was loose fill for some other feature
9 that maybe had a pipe or a drain, we'd typically find it
10 there. We'd find old pilings with the tar around it. But
11 there were many instances where I was personally onsite and
12 removed that phenomenon, where we had to remove more.

13 Q. And on those incidents where you were personally onsite
14 and observed those phenomena, what was your experience
15 personally of having interaction with the EPA managers and
16 representatives along the lines you told me happened in a more
17 general way? What's your personal recollection?

18 A. They would come right over, stand shoulder to shoulder
19 with me and observe the same phenomenon, and tell me, Tom, you
20 need to dig more.

21 Q. Did you ever have a situation that you're aware of where
22 as you were doing this source removal and excavating this tar
23 impacted, this gooey soil and tar that was down there in this
24 area of shallow groundwater, did you ever have an experience
25 where the EPA representative said, we don't want you to

THOMAS EFFINGER - DIRECT EXAMINATION

1 excavate any more, you're taking too much of this material
2 out, we want you to leave it?

3 A. Never. No, sir, we never had that occur.

4 Q. Did you ever have any criticism at all, from the beginning
5 of any of the excavation of the soil impacted materials to the
6 present, where the environmental protection service ever was
7 critical of the amount of that gooey tar that you got out of
8 that soil as source material?

9 A. No, sir, they were never critical. They were mostly
10 complimentary about our aggressiveness to remove that tar that
11 we had -- we took it as a very serious obligation, and that we
12 recognized it was critically important for us to be able to
13 achieve the standards that we were trying to achieve for
14 groundwater at this site.

15 Q. In terms of coordinating with the agencies, and I know
16 you've been speaking primarily about the EPA, and some degree
17 about South Carolina DHEC, were there other agencies involved
18 in coordinating or providing oversight to you and your company
19 as this work was proceeding?

20 A. Yes, sir.

21 Q. And what were some of the principal other agencies that
22 you had to interact with or respond to their oversight?

23 A. The Corps of Engineers, because of the Cooper River
24 potential impacts, U.S. Fish and Wildlife, the Office of
25 Coastal Resource Management, again concerned about the

THOMAS EFFINGER - DIRECT EXAMINATION

1 shoreline and the potential impacts to the shore. NOAA,
2 National Oceanographic Aeronautical -- I can't remember the
3 whole acronym. But they would also arrive onsite, and they
4 were very concerned about how we were managing sediments and
5 issues that might impact the Cooper River. Those are the
6 primary ones.

7 Q. And with regard to those individuals, would you also have
8 been the principal representative from SCE&G that would have
9 been the, at least the point person, the first --

10 A. Yes, sir.

11 Q. -- first line person to deal with them?

12 A. Yes, sir. And on many occasion I spoke with them
13 directly.

14 Q. I want to ask you what --

15 THE COURT: Let's take a little break. It's 11:30.
16 Let's take about 15 minutes.

17 Someone mentioned to me last week, I don't know who they
18 talked to, but your desire to get a place to sit down? A
19 conference room or something in the courthouse?

20 (Discussion held off the record.)

21 (A recess was held at this time.)

22 THE COURT: Go ahead.

23 MR. FELMLY: Thank you, Your Honor.

24 BY MR. FELMLY:

25 Q. Mr. Effinger, as this remediation work was done over these

THOMAS EFFINGER - DIRECT EXAMINATION

1 many years, did your company document with photographs, from
2 time to time, the work that was going on?

3 A. Yes, we did. We used -- we got our photographs, as well
4 as our contractor took many photographs.

5 MR. FELMLY: And they've been exchanged as part of
6 the discovery here.

7 Q. What I would like to do is just show you a photograph, if
8 Denise would bring it up. This is from Exhibit 35, which is a
9 packet of -- some of the photos?

10 THE COURT: Mr. Felmly, let me interrupt you just a
11 minute.

12 When did SCE&G become involved with this land? When did
13 you --

14 A. Probably in the late 80s, '89, '90. But we have the
15 substation there. Is what you're talking about the electric
16 substation?

17 THE COURT: As far as the gas, the production of the
18 gas, SCE&G never did that?

19 A. No, there was a time later in the plant life that SCE&G
20 has liability for. Is that what you're asking?

21 THE COURT: Yes.

22 A. Yes, sir.

23 THE COURT: So your first involvement with the site
24 was with the substation?

25 A. No, previous to that we had predecessor companies that

THOMAS EFFINGER - DIRECT EXAMINATION

1 operated the gas plants.

2 THE COURT: During what period of time?

3 A. That was a tough one to answer, Your Honor. Because
4 there's a lot of predecessors involved. We talked about
5 whether or not the Charleston Gas Light Company, who
6 originally built the plant in 1855, was a predecessor or not,
7 and how that relationship occurred. And I'm not versed well
8 enough in legal to answer that.

9 But then later on there was some other --

10 THE COURT: We just got into a discussion during the
11 break, and I thought I'd try to clear it up now. Go ahead.

12 MR. FELMLY: By the way, Your Honor, there is
13 information, and Mr. Varon and I think probably illuminate
14 that, there is material we have on that subject. I'm not sure
15 Mr. Effinger is familiar with it as others.

16 BY MR. FELMLY:

17 Q. Mr. Effinger, the photograph that I've got there --

18 MR. FELMLY: And, Denise, if you could bring up and
19 enlarge the top frame of that.

20 Q. What it says is phase six Luden's selective DNAPL removal.
21 Does this -- tell me what this -- tell what this photograph
22 depicts.

23 A. This shows one of our removal areas. And we would
24 typically remove a 16-by-16 square going down to that clay-
25 confining layer, which could be ten to 15 feet below grade.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Here you see an old retaining wall that was in place, and it
2 didn't go all the way down to the clay. So as we removed the
3 soil, you could see at the bottom of that, there was some tar
4 that then seeped out from underneath this wall. So that had
5 to be cleaned up. So this just shows one of the areas that
6 was excavated. It's actually alongside Charlotte Street
7 towards the Cooper River, and we called it Luden's because of
8 the old Luden's ownership of that property where the steam
9 plant was located.

10 MR. FELMLY: Denise, if you could enlarge just the
11 area at the bottom of the hole. Top photo, but the -- that's
12 the area. If you could bring that up.

13 Q. And focusing the attention on the area where you were
14 talking about, to what extent does this photo depict impacted
15 soils or soil materials affected with tarry product?

16 A. It does; it's hard to see it in the photo. It's hard to
17 really get an appreciation for where the tar is, but primarily
18 you can smell it when you're in there working. We've already
19 pumped water out of this hole. There's a little bit of water
20 standing there. But then underneath that, that concrete, you
21 can see where there's more highly impacted material.

22 Q. And if you now open it up and take a look at the second
23 frame below, does this photo identify or show any of the areas
24 that would have tar-impacted soils?

25 A. Yes, it does. You could kind of see it at the bottom.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Again, we're at Luden's. Some of that material that's kind of
2 granular, there was some slag in there with it. Slag being
3 what would have been removed from an old boiler. And the tar
4 residing down in and amongst that.

5 Q. And the tar is going to be a darker color?

6 A. Yes.

7 Q. Is that right?

8 A. Yes, sir.

9 Q. When you take that soil out of there, when you're doing
10 this process of removing these impacted soils, just what's the
11 short version on what you have to do with that in order to
12 safely dispose of it? What's the process you have to go
13 through?

14 A. To safely manage it? Well, we had to get it out of the
15 hole, and it would be extremely wet. You've got a lot of
16 moisture involved in that. So typically we would take that
17 soil back to a staging area where we would mix it with cement
18 kiln dust to kind of dry it out and make sure it could be
19 transported down the road safely.

20 Initially we were able to do low-temperature thermal
21 desorption, we'd run it through a burner, an old asphalt plant
22 in Summerville. As this unit shut down, then we had to carry
23 these materials up to another dirt burner and treat soil. And
24 that was in Pergo -- at Pergo in Virginia, near Doswell,
25 Virginia.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. And in terms of that process of disposing of contaminated
2 soils, is there a fair amount of regulation and rules as to
3 how that has to be done?

4 A. Oh, yeah. All of that has to be documented. Because
5 we're doing this under the federal oversight, so all that has
6 to be documented. There's manifests, there's weigh tickets,
7 and then there's receipts from the facility as they received
8 the material. And then that's all assembled and put into a
9 follow-up report.

10 Q. Now, you said before that the -- because of the proximity
11 to the river, that you've got a pretty high water table there,
12 the groundwater is quite close to the surface?

13 A. Yes, sir, across the entire site actually. Once you get
14 to about three feet or so, then you're into what they call the
15 groundwater zone, it's saturated with water in the pore space
16 between the dirt molecules.

17 Q. So when you dig down here, and it looks like you're below
18 three feet in this picture, how are you dealing with the
19 groundwater with that kind of a situation?

20 A. As we opened up the hole, then the groundwater would flow
21 into that. So we would drop a pump suction into the hole, and
22 we used a siphon pump, we called it a Sykes pump, and it would
23 actually be able to draw that water out. That water would
24 have to be pumped through a tank, a big frac tank that was
25 located on the site, allow the solids to settle out. We'd run

THOMAS EFFINGER - DIRECT EXAMINATION

1 that through filtration, bag filters, to remove the suspended
2 particles that would be in it just from the soil and sediment.
3 Then we'd run it through activated carbon before it would be
4 released to a POTW. And had to meet their standards to be
5 able to release it to that sanitary sewer. POTW stands for
6 publicly-owned treatment works, but it's the sanitary sewer
7 for Charleston. And we would record the amount that was
8 discharged and report that to them on a frequency and pay them
9 for handling that water for us.

10 Q. And what's the order of magnitude, if you know, of the
11 total amount of gallonage that has been documented that you
12 treated in that fashion by removing that contaminated water?

13 A. Something on the order of 3 million gallons over the life
14 of the excavation work that's taken place.

15 Q. Now, if you did not do the excavation and removed the
16 source material and the gooey tar and dig it right out of
17 there, there's been some talk about pump and treat approach.
18 Could you not put a pump down in that stuff and suck it out or
19 take it out that way? The impacted soils.

20 A. Yeah, pump and treat typically refers to treating that
21 dissolved phase that's in the groundwater. So you're removing
22 the groundwater, and they try to use it to manage it as a
23 hydraulic containment, so that groundwater doesn't go anywhere
24 else. But as you draw all that groundwater out, then you run
25 that through the filtration system to remove those

THOMAS EFFINGER - DIRECT EXAMINATION

1 contaminants, and try to manage it that way. But again, it's
2 like trying to manage a flame on a candle that you can't put
3 out without removing the wax. If you don't remove the wax,
4 that candle's just going to continue to burn indefinitely.
5 And what we've seen is that there's so much tar at this site,
6 that if you didn't get it out, you would be -- you would be
7 running that operation for a very very long time.

8 Q. All right. Now what I would like to do is move into some
9 of the formal decisions and documents and things that relate
10 to this remediation.

11 THE COURT: After you get the dirt out --

12 A. Yes, sir.

13 THE COURT: -- you treated it at this plant in
14 Virginia, I think you said.

15 A. Right.

16 THE COURT: What do you do with the soil then?

17 A. They landfill it on site. It really would be cost
18 prohibitive to bring that soil back.

19 THE COURT: So it would be okay to bring it back, if
20 it wasn't cost prohibitive?

21 A. Right. Right. So what we do instead is we get clean
22 backfill, we check any contaminants that are in that, and
23 that's what we put back in the hole. Of course, as we're
24 digging all of these areas, we open up that 16-by-16 area, we
25 don't want to leave that open, so we backfill it before we

THOMAS EFFINGER - DIRECT EXAMINATION

1 move to the next excavation hole.

2 BY MR. FELMLY:

3 Q. And you're getting your clean backfill from somewhere here
4 locally?

5 A. Locally, yes, sir, and we check that to make sure it
6 doesn't have contamination in it.

7 Q. All right. The first administrative order by consent that
8 I want to bring up, and I'm not going to go through all the
9 pages on this, is Plaintiff's Exhibit 9, which is
10 administrative order of consent from 1993. And can you tell
11 me, Mr. Effinger, what is this document? Procedurally what
12 does this document accomplish at that time frame?

13 A. There was a lot of activity that took place prior to this,
14 where folks were doing their studies, the City did some
15 studies, we went out and checked the soil, but once you get to
16 this point, EPA has come in and they've taken jurisdiction and
17 they've taken the lead over the State agency, which is South
18 Carolina DHEC.

19 And this document kind of lays out the fact that a
20 remedial investigation feasibility study needs to be
21 conducted, and then identifies South Carolina Electric and Gas
22 Company as the responsible party to do that work. It also
23 identifies the City of Charleston and City of Charleston
24 Housing Authority. But SCE&G took the lead because it had the
25 expertise to do the work, and the primary features were on our

THOMAS EFFINGER - DIRECT EXAMINATION

1 electric substation.

2 So this lays out how that work needs to be conducted, that
3 it needs to follow a set protocol, QA/QC procedures, how the
4 EPA gets reimbursed for their oversight costs. And the
5 general format of the report that needs to be submitted. It
6 talks about the area, talks about the site history, you know,
7 it kind of lays everything out that needs to occur at the
8 site.

9 Q. So that's contemplating this intense investigation of the
10 site and reporting back on what they find?

11 A. Yes, sir, it talks about the process and how the process
12 needs to be conducted to comply with superfund.

13 Q. Now let me bring up another document, it's Exhibit 28, if
14 could you bring that up, it's called a baseline risk
15 assessment. And I'm going to ask you to define what a
16 baseline risk assessment document is.

17 A. The baseline risk assessment looks at the contaminants
18 that exist at the site, and it evaluates what the potential
19 health effects would be. In a lot of cases it not only looks
20 at human health effects, but also ecological effects. And it
21 evaluates it from a carcinogenic standpoint and looks at how
22 many people out of a million might get cancer if they're
23 exposed to this material over a 70-year life span.

24 It might also look at the hazard quotient, which would be
25 the other health effects that would occur if someone or some

THOMAS EFFINGER - DIRECT EXAMINATION

1 organism were exposed to the contaminants present at the site.
2 And it evaluates whether or not those risks are acceptable per
3 an EPA standard.

4 MR. FELMLY: Let me ask Denise, if you could, to
5 enlarge the top half of the page and zoom that up, please.

6 Q. So this document is a February 8th, 1996 reporting or
7 transmission of baseline risk assessment data for the Calhoun
8 Park area, and you've described for us what the nature of the
9 information in this report is. This is, as I understand what
10 you've said, considering what the human health risks are, is
11 that right?

12 A. Yes, sir. And this was transmitting that document to a
13 Mr. Larry Knighter, who was -- had responsibility for the City
14 of Charleston Housing Development.

15 Q. And do you have an understanding of what types of data was
16 obtained and what types of studies were made in order to
17 determine whether or not people in the area would be at risk
18 from these contaminants?

19 A. Yes, sir, it used all of the analytical data, which looked
20 at the organic contamination, primarily benzene, toluene,
21 ethylbenzene and xylene. Also the polyaromatic hydrocarbons
22 which are in the tar. They make up the tar. They looked at
23 metals and what those concentrations were, and then they
24 looked at data tables that talked about what exposures create
25 those health effects. They have to make assumptions regarding

THOMAS EFFINGER - DIRECT EXAMINATION

1 whether or not there is a receptor, a human or an organism
2 that would be exposed to those contaminants in concentrations
3 which exceeded a level which would put them at risk.

4 Q. I'd like to bring up Exhibit 25, which is entitled the
5 Fluor Daniel GTI draft final remedial investigation report.
6 And this is the actual exhibit, Mr. Effinger, I hold in my
7 hand this hard copy exhibit. What we see on the screen is
8 obviously the first page of that. But is this approximately
9 four- or five-inch-thick document the actual report that we're
10 just seeing the first page on the screen?

11 A. Yes, sir. But I can assure you there were several draft
12 versions before that, and a lot of comments that needed to be
13 resolved and a lot of -- a lot more paper that was sent back
14 and forth to get to that point.

15 Q. So now we're not going to go through every page of this
16 investigation report. In fact, we're going to go through
17 almost none of it. But what I would appreciate telling the
18 Court is what is the type of information, what's the general
19 nature or description of what by this time in 1996, as
20 Exhibit 25 indicates, has been done in order to assess or
21 investigate the areas of work that need to be done on this
22 site?

23 A. The purpose of the remedial investigation report is to
24 document all the investigative work that's been done. We
25 talked about the geoprobe work and the samples that were

THOMAS EFFINGER - DIRECT EXAMINATION

1 obtained from that. And so that gives you contaminant
2 concentrations in the various media, in soil, in groundwater.
3 We were starting to look at sediments, so all of that is
4 captured and documented in this report. And then there are
5 some conclusions that are made about where the contamination
6 exists and what needs to be done to manage it. This is in
7 September of '96. So we also -- give me just a second here.
8 Yeah. So we were also, after collecting all of that
9 information, then we evaluated different technologies that
10 could be applied to clean up these issues.

11 Q. Incidentally, you have on the stand with you a little
12 sheet that has the dates of these reports, sort of indication
13 of the chronology, is that --

14 A. It came out of the Gradient report which I believe has
15 already been available to everyone, but it just gives the
16 timeline for the different things, so I don't get confused
17 what year we were doing some of this work. It has taken place
18 over a long period of time, and whether it's '96 versus '98,
19 thinking back that far sometimes gets a little fuzzy for me.

20 Q. Okay. So this was a -- was this a major milestone in the
21 investigation work of the site?

22 A. Yes, sir, it is. It is. This was what was required by
23 that original AOC which you mentioned earlier that was issued
24 to us in 1993. And it required is to go out and conduct this
25 work. Again, you know, this says draft, because we went

THOMAS EFFINGER - DIRECT EXAMINATION

1 through many many iterations before it was accepted by the
2 agencies and met all of their criteria. So it's a pretty
3 significant milestone to get through the remedial
4 investigation.

5 Q. Now I'd like to bring up Exhibit 22, which is entitled an
6 administrative order of consent for removal action.

7 What is an administrative order of consent for removal
8 action, Mr. Effinger?

9 A. It's a legally binding document, but it lays out a
10 protocol for us to do work that's required by EPA as a
11 response action to this site. Again, like that earlier AOC,
12 it lays out who the -- who the responsible party is, who the
13 contacts are at EPA, at the agencies, who from our company's
14 standpoint is responsible, where the reports need to be sent,
15 how we conduct the work, the QA, the QC, the worker health and
16 safety protection, stipulated penalties, it -- again, it's a
17 process thing, it lays out the process for conducting the
18 removal action to comply with EPA requirements.

19 Q. Now, this document is a 1998 document. What happened in
20 or about '98 that -- as far as you know -- required this
21 particular administrative order on consent to be issued?

22 A. Give me a second. Because we had two of them in '98.
23 This is the AOC. About late '97 there was a seep that was
24 observed at the end of Charlotte Street that put some sheen
25 out into the river. They also observed some tar discharging

THOMAS EFFINGER - DIRECT EXAMINATION

1 into the river. So that needed to be immediately contained
2 and then managed.

3 So there was an AOC issued early on to not only effect
4 that mitigation, to mitigate that seep, but then to also do
5 some of the early soil removal action, which was the
6 6000 cubic yards, 6000 tons, it kind of changes from document
7 to document.

8 But this was to allow that early work to take place, to
9 mitigate the seep, and then also manage soil that might
10 eventually be covered as the development took place.

11 Q. Was there any determination made, Mr. Effinger, as to why,
12 after, you know, many years of this plant having been not
13 operating, in that year a seep of tar began to appear in
14 Charlotte Street?

15 A. Yes, sir. We did finally determine what the cause was.
16 But there was an old storm water runoff drain that discharged
17 into the Cooper River right at the end of Charlotte Street.
18 That had some loose backfill around it. So it had some less
19 packed material around it. There was a pressurized water line
20 that fed the Ports Authority property which ruptured, and it
21 was subsurface. So it had a discharge of water from that
22 pressurized line that then put hydraulic pressure on the
23 entire shallow zone.

24 And so any pockets of tar were pushed out from that, that
25 water break, underneath the surface, and it was pushed down

THOMAS EFFINGER - DIRECT EXAMINATION

1 that looser fill material and actually came -- discharged to
2 the river alongside the old storm drain that was there at the
3 end of Charlotte treat. So we believe that was the root
4 cause.

5 We had to initially jump out there and put in a boom to
6 contain the sheen. We put in some sheet piling at the end of
7 the street. We put in some catch basins to collect anything
8 that might travel through the sewer itself, and then we used a
9 long stick excavator to remove sediments that may have
10 accumulated that tar that was out in the Cooper River.

11 Q. This was not a problem or a seep that you were aware of
12 several years earlier when the remedial process of
13 investigation began?

14 A. No, sir. It came on the scene late in '98. Prior to that
15 Record of Decision being issued. Or late in '97, excuse me.

16 Q. And the reference to a removal action, what was removed in
17 connection with trying to remediate this problem of the tar
18 seeping out at Charlotte Street?

19 A. Well, we had to contain it to stop it from continuing to
20 discharge to the Cooper River, but we removed some sediments
21 with that long stick excavator from the shoreline at the end
22 of Charlotte Street, then we also removed the 6000 cubic yards
23 under this order.

24 Q. All right. I'd like to now turn attention to Exhibit 4,
25 which is a document entitled Record of Decision -- Record of

THOMAS EFFINGER - DIRECT EXAMINATION

1 Decision, remedial alternative selection, Calhoun Park
2 superfund site. What is this document?

3 A. All right. This is another huge milestone, and this is a
4 document that EPA issues. And it takes the results of our
5 remedial investigation and our feasibility study which looked
6 at all these different technologies, and then evaluates them,
7 and it discusses all the community, the public, the agency
8 participation, to arrive at a selected remedy.

9 So it goes through all of the different technologies, it
10 describes the site, it goes through the history of the site,
11 it talks about the contamination, talks about the human health
12 risks, but then it talks about for the various media, what
13 needs to be done, what potentially could be done. And then it
14 says here is the selected remedy that the agencies have
15 decided needs to be implemented at the site. It talks about
16 the objectives, and in this document I believe it talks about
17 three objectives for the site. And talks about the cleanup
18 standards that need to be achieved. And then the -- several
19 other -- just administrative issues on how you're going to
20 manage it, how you're going to submit reports.

21 MR. FELMLY: Denise, if you could go forward two
22 pages to 003 on our stamp here. Well, let me -- Bates number
23 is going to end with 18762. Okay. If you could zoom that up,
24 please.

25 Q. This is two pages into the document, although it says

THOMAS EFFINGER - DIRECT EXAMINATION

1 three, they count the cover page. This is signed by somebody
2 named Richard Green, the division director. Is that an EPA
3 official?

4 A. Yes, sir, it is.

5 Q. And this appears to have been issued, this ROD is issued
6 September 30th, '98. Now, you indicated this is a milestone.
7 What is a Record of Decision and why is a Record of Decision a
8 milestone in terms of a cleanup of the site?

9 A. The Record of Decision is where you take all of the
10 investigative information, the discussion with the agencies,
11 the discussion with us as the responsible party to do the
12 cleanup, and capture all that in a document, which talks about
13 the various remedies that could be applied, it talks about the
14 standards that needs to meet, it talks about the objectives,
15 and here you see it talks about it even needing to be cost
16 effective. So it captures all of that information, it
17 captures on the record the community participation,
18 concurrence of the State regulator, South Carolina DHEC in
19 this case, and basically says what the objectives are that
20 need to be implemented at the site.

21 MR. FELMLY: Denise, can you go back one page from
22 that, back to the previous page.

23 Q. Still a little hard to see it, but in the description of
24 the selected remedy, in this declaration of the front of the
25 report does this fairly describe as a summary of some of the

THOMAS EFFINGER - DIRECT EXAMINATION

1 major objectives or statements in this report?

2 A. Yes, sir, it does.

3 Q. It indicates that this remedial action addresses NAPL
4 source areas, shallow groundwater contamination, and
5 contaminated soil as the principal threat at this site. And
6 then it goes on to say sediment and surface water
7 contamination, in addition to intermediate groundwater
8 contamination will be addressed in a separate Record of
9 Decision or ROD.

10 And let me ask you about a couple of things there to make
11 sure we all understand what we're talking about. First of
12 all, though we've heard the word NAPL before, what is NAPL as
13 it's used as an acronym in these documents?

14 A. Yes, sir. NAPL is an acronym for nonaqueous phase
15 liquids, and that just means it won't mix with water. So oil
16 sits on top of water, that would be a NAPL.

17 In dealing with tar, we call that a DNAPL, because it's a
18 dense nonaqueous phase liquid and it sinks in water, it
19 separates from the water, but it will sink in the water. So
20 NAPL is kind of a broader term when we're talking about tar.
21 It might be used interchangeably to mean tar or the main
22 source of contaminant.

23 So that's what NAPL means. There was an objective
24 described in here, there's three objectives really. Removal
25 of NAPL to the maximum extent practicable, that was goal

THOMAS EFFINGER - DIRECT EXAMINATION

1 number one was to get as much of that source out as possible.
2 Then to contain the nonrestorable source areas. And when you
3 contain something, you prevent it from migrating any further
4 and causing any more damage. So that was goal number two.

5 And then third was restoration of the aqueous phase plume.
6 Once you had removed as much as you could, once you had
7 contained it so it can't spread any further, then the agencies
8 wanted you to restore the aquifer to, in this case, drinking
9 water standards. So the drinking water standards would lay
10 out what constituent levels could be present, and we needed to
11 make sure we achieved those.

12 Q. At the top of this paragraph that we're looking at, which
13 is sort of in the executive summary of -- I guess they call it
14 the declaration, they referenced that sediment and surface
15 water contamination, in addition to intermediate groundwater
16 contamination will be addressed in a separate ROD. Can you
17 explain to me your understanding, then and now, as to what the
18 sequence of events was going to be in terms of the remediation
19 of the site?

20 A. Yes, sir. As I said early on, we were -- we had actually
21 offered to the City, you know, let us do all the cleanup work
22 before you start your development. But they wanted to get
23 their development going, and they felt they could do it under
24 their own mechanism.

25 So as that work's going on, we're moving very fast to try

THOMAS EFFINGER - DIRECT EXAMINATION

1 and collect the data that we need for the remedial
2 investigation, feasibility study, to collect the information
3 for everyone to reach a consensus and agree on what technology
4 is proposed to clean up this site. And so there was -- you
5 can imagine there was a very robust discussion regarding
6 what's an appropriate technology, from the very very
7 conservative, to folks that were looking at newer methods to
8 do it.

9 So there was still a lot of just professional disagreement
10 on what needed to be implemented. We still needed to collect
11 more data on sediments, surface waters and intermediate
12 groundwater. But we needed to move forward quickly if we were
13 going to do the cleanup that needed to get done prior to some
14 of these features being developed and put in place.

15 So there was a sense of urgency that had the ROD -- the
16 Record of Decision to cover soil and the ground -- the shallow
17 groundwater issues, which was really the big threats.

18 Q. And what was left for this separate ROD or this yet to be
19 done Record of Decision? What were the areas of work that had
20 not yet been determined to be done?

21 A. Right. There was still not agreement reached on what to
22 do with sediment, how much more work needed to be done during
23 the investigation, how much more information needed to be
24 collected, and the same with intermediate groundwater.

25 And I probably should talk about that, because the shallow

THOMAS EFFINGER - DIRECT EXAMINATION

1 zone went down to about ten to 15 feet, wherever that first
2 clay layer was. And so that impeded the flow. But underneath
3 that were additional aquifers going down to about 50 to 60
4 feet. And there was an upper and a middle and a lower
5 aquifer. So there was -- there was a lot deeper areas that
6 needed more information, needed more sampling, more analysis.

7 And again, we were going through this iterative process.
8 We had collected some data, but the agencies felt like we
9 needed to get more data and have more evaluation on what would
10 be an appropriate technology to treat these other intermediate
11 groundwater and sediment. And then surface water.

12 Q. Now, when you talk about this intermediate groundwater,
13 was it known at this time that there were tar impacts on that
14 groundwater?

15 A. There was some suspicion on site, because of the work that
16 was conducted to build the electric substation. They had to
17 drive some rods down deep to make grounding rods just for the
18 substation operation. And they knew that when they withdrew
19 those rods way back when, that there had been some tar on it
20 there. Had been some discussion with the agencies then. But
21 there was a general discussion to just that process would
22 punch holes in that confining layer. And if the DNAPL were
23 sitting there, it might leak down those holes.

24 So there were some wells, maybe a handful of them at that
25 time, that had some impacts that were noted that was dissolved

THOMAS EFFINGER - DIRECT EXAMINATION

1 in the intermediate groundwater. And those impacts then led
2 us and the agencies to conclude that there is some deeper
3 impacts that would be in the intermediate groundwater.

4 Q. And what about the sediments, what was it about the river
5 sediments that --

6 A. Right.

7 Q. -- was not known at the time of the first ROD and needed
8 to be studied further?

9 A. Well, they knew that there was that brick archway that ran
10 down Calhoun Street and discharged into the Cooper River, and
11 the brick archway, because it's bricks, they knew that the
12 joints leaked. And I had mentioned previously that the
13 shallow groundwater actually flowed toward the southeast. And
14 so if that groundwater, as it flowed, and took these dissolved
15 phase contaminants, it would then go into that brick archway
16 just like a French drain would pick up groundwater, and so
17 that would discharge into the Cooper River. And it was known
18 that there was impacted sediments in the Cooper River. There
19 had actually been some studies done by the City's contractors,
20 Killam, PSI and General Engineering, that detected those
21 contaminated sediments in the Cooper River on or about where
22 that tour boat facility sits today. They knew that there was
23 some areas just north of that where the Aquarium was going to
24 be situated, based on their sediment sampling. Then they knew
25 because of that seep at the end of Charlotte Street, which

THOMAS EFFINGER - DIRECT EXAMINATION

1 occurred in late '97, that we had issues there that needed to
2 be further studies and evaluated for a remedy.

3 MR. FELMLY: If we can go back to the next page, the
4 one you had up previously, Denise, 762, where the signature
5 is. And go to the top paragraph, if you would this time.

6 Q. Again, this is the place where director, Division Director
7 Green signs it. The last sentence of the first paragraph
8 says -- well, actually the one before it, the groundwater
9 portion of the remedy was based on EPA's expectation that the
10 remediation of groundwater to MCLs will be challenging, given
11 the presence of NAPLs at this site. Therefore, a phased
12 approach has been selected consisting of removal or treatment
13 of NAPL to the maximum extent practicable, followed by
14 containment of potentially nonrestorable source areas and
15 restoration of aqueous contaminant plumes.

16 That's a mouthful to me, Mr. Effinger. Let me try the
17 break it down. First of all, the discussion of the
18 expectation that remediation to groundwater to MCLs will be
19 challenging, I think you mentioned it before, but what is an
20 MCL that they're aiming at as a standard?

21 A. Again, that's another environmental acronym which refers
22 to the maximum contaminant levels. And those are specified in
23 the Safe Drinking Water Act.

24 Q. And as it applies to this type of remediation and
25 groundwater, is that another way of saying drinking water

THOMAS EFFINGER - DIRECT EXAMINATION

1 standard is what we're looking at, and we're not sure we're
2 going to ever get this to drinking water?

3 A. Yes, sir, and that was based upon the knowledge that there
4 was a lot of this tar spread across the site in many different
5 areas. And that even though you do removal, you're not going
6 to be able to get every molecule of tar out of the ground. So
7 it's going to take awhile for the drinking water standard to
8 be met at the site.

9 Q. Now, just a moment on groundwater. And Dr. Shrifrin, the
10 environmental scientist, can talk about this more. But this
11 is a moving body of water under the surface, is it not?

12 A. Yes, sir.

13 Q. And in this area in Charleston, approximately which
14 direction, or how can you best describe to us which way the
15 groundwater under the surface is flowing?

16 A. Well, the shallow groundwater back at our electric
17 substation would then flow southeast, so it would be kind of
18 diagonal going towards the Cooper River.

19 Q. And is it the case that the groundwater was then flowing
20 through this contaminated section and picking up contaminants?

21 A. Yes, sir. And it's coming from upgradient of our site.
22 As it goes through that tar, it's picking up those
23 contaminants in what we call the dissolved phase. So it's
24 actually in -- those contaminants are in groundwater, and
25 those are arsenic and metals and the PAHs and all of that. So

THOMAS EFFINGER - DIRECT EXAMINATION

1 as it flows through our property, picks that up, and then
2 would carry them offsite. So --

3 Q. Now, is anybody actually drinking this water in this
4 location?

5 A. No, sir; two reasons. No one has drinking water wells on
6 the peninsula of Charleston; and number two, this is a very
7 shallow zone. So if you put in a drinking water well, you're
8 not going to be in a ten-foot range, you're going to be much
9 deeper than that anywhere, where traditional drinking water
10 wells are installed. But there are no drinking water wells in
11 this area. That all had to be examined, and that was
12 confirmed.

13 Q. But even though there was not the situation where people
14 would be putting wells into this area and drinking it, the
15 MCL, or the standard that you were measured by, was still a
16 drinking water standard?

17 A. Yes, sir.

18 Q. And that is still the standard today that is prospectively
19 applied to this site?

20 A. Yes, sir, it is.

21 Q. And so then it goes on to say, therefore, a phased
22 approach has been selected. And it goes on to describe the
23 removal.

24 Can you explain for the benefit of the Court in a general
25 sense, and then we'll get into the document in some detail,

THOMAS EFFINGER - DIRECT EXAMINATION

1 what was the phased approach that applied to this site, in
2 light of what you've told us about the various areas, some of
3 which were not going to be dealt with immediately?

4 A. Yes, sir. Again, recognizing that it was going to be
5 challenging, and you couldn't put an exact remedy on paper
6 that was, you know, once you implement it, you're done, no.

7 We argued and with -- with them, that we need to start
8 doing this removal activity and then see how the groundwater
9 responds and gets cleaned up. As you remove more of that
10 source, you're going to have less contaminants going into the
11 groundwater, but you also have some other processes that help
12 you. Naturally attenuation as water percolates through the
13 ground, it cleans the water up and removes the contaminants,
14 either through biological processes or other physical chemical
15 mechanisms.

16 So we knew that by removing the source, that would be
17 cleaned up. We also knew that as we got out there with the
18 trackhoe and dug these areas out, we would learn more about
19 the site and be able to better implement any potential
20 technologies to clean it up. So the phased approach is
21 arguing -- well, is really them agreeing with us to go out
22 there and to do the removal action starting at the offsite
23 properties and work our way off towards the substation to do
24 those removal actions, but let's leave the other ones to be
25 continued to be investigated and resolved at a later date.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. Are there multiple places in the, I think 64 pages of text
2 of document, where the discussion about a second ROD or a
3 second ROD is mentioned?

4 A. Yes, there is. EPA commits in this document to have a
5 second Record of Decision to address intermediate groundwater,
6 surface water and sediments.

7 MR. FELMLY: Denise, if you could bring me to page
8 771 is the end of the Bates number.

9 Q. In the bottom portion of this, and maybe just highlight or
10 zoom up on the lower half of this paragraph, this is actually
11 on page 11 of the report which ends with Bates number 18771.
12 It talks about the seeps you've been mentioning, and then it
13 says the mitigation of the source areas responsible for these
14 seeps, the contaminated sediments resulting from the seeps,
15 and the sediment contamination documented in the RI -- I
16 assume that's remedial investigation?

17 A. Yes, sir.

18 Q. -- will be addressed in a separate ROD for this site. And
19 then it discusses that AOC removal, AOC that we talked about
20 earlier.

21 A. Um-hum.

22 Q. Is this talking about those Charlotte Street seeps that
23 cropped up in 1997 or 1998?

24 A. Yes, sir. And it's referring to that early action and
25 then trying to catch this document up with that earlier

THOMAS EFFINGER - DIRECT EXAMINATION

1 action.

2 Q. So is this document here saying we have these seeps, we
3 have contaminants in the river and sediments, and we're going
4 to be studying that further and dealing with that in a later
5 ROD or a later remedy Record of Decision?

6 A. Yes.

7 Q. And do you know if there indeed was further investigation
8 after September of '98 when this document was issued, to go
9 further and actually check into how to respond to those areas
10 that they're reporting on here?

11 A. Yes, there were, there were a couple of efforts. And two
12 records that were submitted. One dealing with intermediate
13 groundwater, and then another one evaluating sediments and
14 following an EPA protocol and then presenting that
15 information.

16 MR. FELMLY: Denise, if you could go to the Bates
17 number that ends with 787, please. And I'm going to be
18 referencing the sediments that -- Thank you very much.

19 Q. In the top paragraph talking about, again, the river
20 sediments and dealing with some of the same issues, the last
21 two sentences say, of that first paragraph, the extent of
22 contamination associated with this release is under
23 investigation and will ultimately impact any future plans for
24 remediating the sediments. A second ROD will be issued to
25 address the sediments once the sediment investigation is

THOMAS EFFINGER - DIRECT EXAMINATION

1 complete.

2 And is that consistent with what you just described to the
3 Court?

4 A. Yes, sir.

5 MR. FELMLY: If you could go to page 789 as the last
6 three Bates number, Denise, referring to site risks.

7 Q. First of all, Mr. Effinger, the section that I'm showing
8 you there, which is part of this 1998 ROD called summary of
9 site risks, what generally is covered in the portion of the
10 document called a ROD that discusses site risks? What are we
11 going to find there?

12 A. Again, they're using -- there were several studies that
13 were done, but they're evaluating in this area, they're
14 talking about the evaluation that was done for human health
15 risks, and that would be through exposure to these
16 contaminants over a certain time period and assuming a
17 certain -- a certain -- I guess mechanism for the -- either
18 the construction worker or resident or a child or someone like
19 that. So it goes through all of those different scenarios,
20 based upon the occupation of the person being exposed and
21 evaluating the concentrations of the chemicals, and then
22 through a complicated formula deriving what the incidence of
23 cancer would be per million people.

24 MR. FELMLY: Now, if you could highlight, Denise, the
25 last three sentences of that top paragraph, start being where

THOMAS EFFINGER - DIRECT EXAMINATION

1 it says environmental risks.

2 I'm interested in the language that starts with
3 environmental risks are presently unresolved due to the
4 ongoing discharge of coal tar from seeps as discussed in
5 section four.

6 That's the seeps you've been talking about that cropped up
7 in '97 and '98?

8 A. Yes, sir. We had evaluated the human health risks through
9 the process. That had been done. But then because sediments
10 are out in the river, they require you to evaluate the
11 eco-risks, and that would be the risks presented to the
12 animals, the critters that live in the sentiments, they call
13 them benthic organisms, and then the higher organisms that
14 either consume these benthic organisms, or would have exposure
15 to that contaminated sediment.

16 Q. So the last sentence in this paragraph sites environmental
17 risks resulting from these seeps, in addition to the overall
18 environmental risks associated with this site, will be
19 evaluated under operable unit two and addressed in a second
20 ROD for this site.

21 So that was another topic that was going to be
22 addressed --

23 A. Yes, sir.

24 Q. -- when the second ROD came along.

25 A. They're letting us know that that issue is still open and

THOMAS EFFINGER - DIRECT EXAMINATION

1 needs to be resolved.

2 Q. And this term operable unit number two, and we've seen
3 references to operable unit number one, can you explain to us
4 that nomenclature?

5 A. Yeah, that's really a term that EPA likes to use to divide
6 up the media that are being discussed in their Record of
7 Decision. So operable unit two dealt with the intermediate
8 groundwater as a separate media, sediments as a separate
9 media, and then surface water as a separate media from what
10 was evaluated in the ROD for the Record of Decision for OU-1.

11 Q. So they're saying we're going to deal with this later on
12 after further studies?

13 A. They segment it so that we've got to deal with these other
14 three media after conducting work under the Record of Decision
15 for OU-1.

16 MR. FELMLY: If you could bring that up whole page so
17 we have a context, Denise.

18 Q. In the area that is at the bottom of the page, actually if
19 you go just highlight the bottom paragraph in this area of
20 site risks, this indicates that they had had that baseline
21 assessment, and what they had done in terms of reviewing
22 various sample locations, is that right?

23 A. Yes, sir.

24 Q. So they had done work analyzing this, but now we're going
25 to do more work because of the seeps and the impact of that?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. That's right. They also refer to the Killam report and
2 the PSI report, which were -- those were two companies that
3 did work for the City, and they did that work in the sediments
4 that I had mentioned earlier in looking at the location where
5 the tour boat facility was going to be, boat, and the South
6 Carolina Aquarium. So they were using other reports from
7 other contractors to kind of pull that into, I guess, this
8 baseline risk assessment.

9 MR. FELMLY: If you could go to page 798, Denise,
10 Bates ending on 798. And in terms of the right spot here --
11 excuse me, 796. Okay. If you could enlarge the top half of
12 the page down through the -- Right there.

13 Q. This is a discussion dealing with -- if we've gone back
14 two pages to what starts Section 7.1, this is under the
15 category groundwater slash NAPL, and they're discussing what's
16 going to happen to groundwater and what's going to happen to
17 the NAPL in the groundwater.

18 Now, again we have at the top of the page references to a
19 phased approach for groundwater, and that occurs at the
20 beginning of the second paragraph right under the bulleted
21 items, is that right?

22 A. Yes. Yes, sir.

23 Q. And again, this document says the initial effort will be
24 to concentrate on the removal or treatment of NAPLs previously
25 identified at the former gas holder, the former rail spur and

THOMAS EFFINGER - DIRECT EXAMINATION

1 the former oil tanks. This would typically consist of
2 prephase NAPL removal aided by pump and treat. Removal of
3 NAPLs is anticipated to have the effect of mitigating the
4 primary contaminant source responsible for groundwater
5 contamination at this site. Concurrent with the NAPL,
6 additional actions will be undertaken to restore the aqueous
7 contaminant plumes to meet MCLs.

8 Now, that was the work that you described to us that you
9 were undergoing by the removal of those NAPLs that were down
10 in that shallower zone, is that right?

11 A. Yes, sir.

12 Q. So you went on to do that work that's described here?

13 A. Yes, sir.

14 Q. And if we go back up to the top of the page and we talk
15 about the objectives, that first bullet says removal or
16 treatment of NAPL to the maximum extent practicable. Was that
17 the watch word?

18 A. The watch word?

19 Q. That's the standard? Is that --

20 A. Yeah, again they're focusing on the three objectives,
21 removal, containment and restoration. But removal is the key.
22 If you don't get the source out of there, you're going to
23 continue to have dissolve phase existent at shallow
24 groundwater for a very long time.

25 Q. Now, the intermediate groundwater is not part of the ROD,

THOMAS EFFINGER - DIRECT EXAMINATION

1 the first ROD, the 1998 ROD, is that correct?

2 A. That's correct.

3 Q. Is that ROD referred to as the OU-1 ROD, the operable unit
4 one ROD?

5 A. Yes, sir.

6 Q. And the one they're talking about that's going to come
7 sometime in the future is the OU-2 ROD?

8 A. That's correct.

9 Q. At the bottom of the page we have blown up here, or the
10 portion blown up it says the NAPL removal will be monitored to
11 monitor the practicability of such actions. Should complete
12 source removal or treatment prove impractical, the use of
13 mitigation controls or containment measures will be taken for
14 the nonrestorable source areas.

15 The determination of technical impracticability will be
16 made by EPA in consultation with South Carolina DHEC based on
17 site specific characterization data and remedy performance
18 data. And then it goes on to say what that data is.

19 I want to ask you about this phrase, the determination of
20 technical impracticability. What is that process that they
21 are discussing in this ROD?

22 A. EPA actually has a prescribed process to achieve a
23 technical impracticability waiver. And what they're waiving
24 is the standard that they have applied in this ROD. In this
25 case we have to achieve drinking water standards. So if you

THOMAS EFFINGER - DIRECT EXAMINATION

1 go through the steps to prove technical impracticability, then
2 they will give you some relief on those standards, as long as
3 there is not threatened or imminent harm to human health or
4 the environment. So that's one of the conditions.

5 The other is you have to try everything technically
6 practicable to try and remove that tar. So you have to do
7 everything in your power to try and -- to do this removal that
8 they've talked about here. And to try and achieve the
9 drinking water standards for groundwater, which was their
10 overarching goal.

11 Q. Now, if we look at the top of the page there's a reference
12 in a portion we didn't really read, to an EPA document called
13 guidance for evaluating the technical impracticability of
14 groundwater restoration.

15 So I'm assuming they have standards, guidelines, booklets
16 and things that tell them how to do this.

17 A. Yes, sir.

18 Q. And do I understand you to say this is a process when the
19 EPA is satisfied you cannot get this water to drinking water
20 standards, they may give you this waiver?

21 A. That's correct. If you try everything that you can, even
22 though they lay out some technologies in the ROD, there might
23 be other technologies which come along later that they might
24 require you to go do. So that you have to try everything that
25 you can before you're going to get that waiver.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. Now, they wrote this, or at least it was published out
2 here, as we saw in September of 1998, and they're discussing
3 this procedure and process. Here we are in 2009. Have you
4 met the MCL of drinking water standards on the groundwater
5 flowing through this site?

6 A. Well, we have in some of the outlying areas where we
7 removed the source, and it's actually the plume has gotten
8 smaller and it's coming back towards the electric substation.
9 So as you get to Calhoun Street, before you get over onto some
10 of those properties that at least the majority of groundwater
11 now meets drinking water standards as a result of that
12 removal. So we've reduced the plume, but it's still exceeding
13 MCLs underneath that electric substation.

14 Q. So -- and that would be the area that would have been
15 closest to where the historic MGP actually sat?

16 A. Yes, sir.

17 Q. And with regard to that area, the area that is more -- I'm
18 not sure the right words -- concentrated, but closer to the
19 original source --

20 A. Um-hum.

21 Q. -- there, have you not met the MCL of groundwater that
22 would be suitable for drinking?

23 A. That's correct. And a lot of that is because of the above
24 surface equipment, the electric substation that's critical to
25 the electric distribution infrastructure in Charleston, you

THOMAS EFFINGER - DIRECT EXAMINATION

1 know, we can't take that out of service and we can't dig
2 underneath it. We dug around it as much as we possibly could.
3 And then there's also the roads, and there appears to be
4 material underneath the roads that we could not get to
5 underneath Charlotte Street and underneath Concord Street. So
6 there -- and then there's an area on the south side of the
7 electric substation where there's underground electric cable.
8 And a duct bank. And so we couldn't excavate in that area for
9 fear of disturbing that electrical cable and not only shutting
10 down the feed to Mt. Pleasant and outlying areas, but also the
11 safety issues with the guy doing the excavation.

12 Q. So in terms of the future of the site and what levels of
13 additional work you're going to have to do, before a
14 determination will be made on whether the EPA would issue a
15 technical impracticability waiver, you're not there yet, I
16 gather?

17 A. No, sir. We're not by any means. We're still doing the
18 monitoring and reporting, and we discussed what's happening
19 with the contaminants over time. EPA has asked us to write
20 several tech memos, one that was recently made final and
21 submitted dealing with things like soil vapor intrusion,
22 changes in the arsenic standard and revisiting that issue,
23 since the original Record of Decision was issued. Shallow
24 groundwater monitoring protocols, intermediate groundwater
25 monitoring protocols and follow-up reports to the work that

THOMAS EFFINGER - DIRECT EXAMINATION

1 was done.

2 Q. What is your estimate of the period of time or the
3 interval from this stage forward where you believe this
4 question of whether the MCLs are going to be met or your
5 efforts to further reduce the load of contaminants coming from
6 the subsurface NAPL is going to be addressed for purposes of
7 whether the EPA would issue a technical impracticability
8 waiver?

9 A. I wouldn't begin to guess that. I can tell you that I do
10 not believe we will ever meet drinking water MCLs, site-wide.
11 There are areas where we will, but other areas back at the
12 site we -- I don't believe will ever be able to meet those
13 drinking water MCLs. How long it's going to take us to get a
14 TI waiver, it's a long process that you have to go through.
15 You have to get concurrence from other agencies. I wouldn't
16 begin to guess how long that might take.

17 Q. But is this -- are you discussing something that's a
18 matter of years?

19 A. Yes, sir. Or decades.

20 Q. Pardon?

21 A. Or decades. I don't know.

22 Q. So in terms of the groundwater remediation, and of course
23 we've had the second ROD which we're going to talk about in a
24 few minutes here, but you have had other findings and other
25 work done on this remaining work, but even after all that work

THOMAS EFFINGER - DIRECT EXAMINATION

1 has been done, as you sit here in 2009, as to groundwater
2 remediation, you have not been able to get this to the
3 standard of the MCL, is that right?

4 MR. BARGREN: Objection, leading.

5 THE COURT: Half the questions he's asked have been
6 leading. But go ahead, I'll permit it.

7 MR. FELMLY: I was really trying to summarize.

8 THE COURT: Well, you know, I'm pretty strict on
9 leading questions when we have a jury here. I don't think
10 he's going to lead me down any primrose path. Go ahead, I'll
11 permit the question.

12 BY MR. FELMLY:

13 Q. In your own words, as to what extent, Mr. Effinger, even
14 in the face of all this work that you've done, where are you
15 in terms of getting this site to the standard that the ROD
16 mandates, which is MCLs, and when do you think, if ever,
17 you're going to get there?

18 A. We're still pumping tar from some collection areas that we
19 haven't really discussed in much detail. So we're removing
20 tar from the ground at the rate of about 100 gallons a month
21 now. And at the maximum, it was about 400 gallons a month.
22 There's still tar in the ground. And until we get all of that
23 tar out, you're still going to have that dissolved phase
24 leaving the site.

25 And even once you get a great deal of the tar out, if you

THOMAS EFFINGER - DIRECT EXAMINATION

1 get it down to where it's a de minimis level, it's going to
2 take awhile for groundwater to go through that tar and leach
3 out anything that it can leach out from the tar. So I don't
4 have -- I don't hold out a lot of promise that we'll be able
5 to do that any time soon, if ever.

6 THE COURT: There's nothing you can put in there with
7 the groundwater to hasten the process?

8 A. We've tried some things, we've tried that with
9 intermediate groundwater to chew up the contaminants. It had
10 some limited effectiveness. We're continuing to look at other
11 technologies to try and do that. The concern is underneath
12 the electric substation you have to make sure it doesn't
13 affect the subsurface cables and conduits and electrical
14 wires. But that's a difficult issue, because if you put stuff
15 in there to make it more mobile, you better be ready to catch
16 it. Because it might migrate off site, and you might cause
17 more harm than good.

18 We've tried some other processes to oxidize it and, you
19 know, break it down into less toxic constituents, but again,
20 that only has limited effectiveness in the dissolved phase.
21 It's not very effective on the tar. Because this tar is like
22 molasses. It's very thick, it's like roofing tar, if you've
23 ever smelled them put that on a roof, that's what it smells
24 like, like creosote, and this one has the viscosity of
25 molasses. It's very thick. So --

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. My understanding is one of the things you did was to
2 actually try using sort of a natural process, sort of a
3 photoremediation process. Can you describe what that was?

4 A. Oh, phyto?

5 Q. Phyto?

6 A. That was discussed early on, and EPA had a lot of
7 excitement about that technology, and using trees and plants
8 to take the dissolved phase groundwater, and so it would act
9 as a hydraulic containment, at least in that shallow zone, and
10 it would have some effectiveness. It could also cause some
11 remediation -- some conversion of the contaminants in the root
12 zone to less harmful contaminants. So that phytoremediation
13 was tried at the site, and it is along the south side of the
14 electric substation between the bus lane for the parking
15 garage and then our electric substation. And it has had some
16 effectiveness, but the real key is getting that tar out. And
17 so you're not continuing to discharge those dissolved phase
18 contaminants from the site.

19 But phytoremediation is still being studied. The USGS,
20 the United States Geological Survey group is monitoring that.
21 They're providing reports on that and they're continuing to
22 look at it and provide data that we put into the records on
23 how effective that has been.

24 MR. FELMLY: Denise, if you could take us to Bates
25 8811, please.

THOMAS EFFINGER - DIRECT EXAMINATION

1 THE COURT: We're going to recess at 1:00 for lunch,
2 and so since it's about two minutes to 1:00, let's just recess
3 now.

4 MR. FELMLY: That's fine.

5 THE COURT: We'll be in recess until 2:30.

6 (A recess was held at this time.)

7 THE COURT: All right, sir.

8 MR. FELMLY: Thank you, Your Honor.

9 BY MR. FELMLY:

10 Q. Mr. Effinger, I'm still inquiring of you with respect to
11 the 1998 ROD, the Exhibit 4 in our case.

12 MR. FELMLY: And I'd like to go -- and, Denise, if
13 you could bring up to page Bates 811, which talks about the
14 selected remedy, and -- The selected remedy section, which was
15 section nine, goes on to start here.

16 Q. But in connection with the portion that I'm referring to
17 in the middle of the page, there's a statement that says the
18 remedy described has been selected under the authority granted
19 in CERCLA and is consistent with the requirements of the NCP.

20 At any point in any of your dealings with the EPA, did
21 anybody at the EPA ever indicate that they had any concern
22 about NCP compliance or whether the remedy was consistent?

23 MR. BARGREN: Objection, Your Honor, hearsay.

24 THE COURT: Say what?

25 MR. BARGREN: Objection as to hearsay.

THOMAS EFFINGER - DIRECT EXAMINATION

1 MR. FELMLY: First of all, this document is an
2 official record, in terms of the document here, it would be
3 plainly an exception to the hearsay rule.

4 THE COURT: Well, the question was whether he had any
5 conversation with them. I don't know that he's attempting to
6 elicit that conversation yet. It may be hearsay, but let's
7 see what his answer is now.

8 A. No one at EPA or at the State --

9 THE COURT: No, no, he asked you -- I'm sorry, he did
10 ask for hearsay. That would indicate they had any concern
11 about NCP compliance or whether -- I think he can answer that
12 question. Go ahead.

13 A. No one ever said that what we were doing at this site was
14 inconsistent with the National Contingency Plan.

15 Q. In terms of the groundwater response that you've discussed
16 previously --

17 MR. FELMLY: If we could turn, Denise to page 813,
18 under the section of groundwater in the middle of the page,
19 I'd like you to bring up that center paragraph, if you would,
20 this is under groundwater.

21 Q. I want to start with the top sentence, which says the
22 full-scale groundwater NAPL remedy shall be monitored,
23 modified or otherwise enhanced where appropriate to
24 demonstrate that best professional efforts have been made to
25 achieve ARAR-based cleanup levels and the applicable

THOMAS EFFINGER - DIRECT EXAMINATION

1 performance standards of this remedy component.

2 Again, just so we can get some of the acronyms, ARAR
3 refers to what, sir?

4 A. I may get it wrong, but it's Applicable or Relevant and
5 Appropriate Requirements. Those would refer to other state
6 and federal laws that might apply. Like the Clean Water Act,
7 Safe Drinking Water Act, those kinds of things, or any other
8 requirements that EPA or the State agencies would impose.

9 And then the performance standards here, referring to the
10 three objectives in achieving the drinking water standard
11 T-III objectives, again, removing the NAPL, the source, to the
12 maximum extent practicable, containment of the nonrestorable
13 source area, and then restoration of the aqueous phase plume.

14 Q. Down further it says the conceptual remedy applied herein
15 may be modified and enhanced as warranted based on review an
16 analysis of monitoring data generated. Recovery and treatment
17 enhancements may include the installation of additional
18 extraction wells. EPA considers the full-scale groundwater
19 NAPL remedy to be an iterative process which must be conducted
20 for a sufficient period of time before its ability to meet
21 applicable cleanup levels and long-term performance standards
22 can be fully evaluated.

23 Now, as to that sentence and that description of this
24 iterative process, what was your understanding of what was
25 going to be the going forward approach to this full-scale

THOMAS EFFINGER - DIRECT EXAMINATION

1 groundwater remedy?

2 A. Yes, sir, we understood that iterative nature, because as
3 you remove materials, you see how it responds. You also have
4 the ability to see what else is in the ground and what else
5 might need to be taken care of. But iterative, you try some
6 things and look for a positive response and look for ways to
7 enhance that and go back and maybe try other things. And we
8 knew full well and good that the agencies would continue to
9 ask us to try additional measures.

10 Q. So as you come to the point where you received this first
11 ROD and they've described this conceptual remedy and the NAPL
12 removal and the iterative process, what are, in 1998 when this
13 came down, what are going to be the steps that are then going
14 to be facing you to move towards answering these questions and
15 determining where you go next?

16 A. Okay. Well, the steps after this is to prepare a work
17 plan which tells them how we're going to conduct the work, and
18 comply with the requirements in the ROD. Administrative as
19 well as technical. So we write that work plan that describes
20 how we're going to do the work, what steps we're going to go
21 through, what information's going to be submitted, how the
22 workers are going to be protected, how the soil is going to be
23 managed, how the materials removed are going to be handled
24 appropriately. And that work plan has to be submitted and
25 approved before we can actually go out there and do any of the

THOMAS EFFINGER - DIRECT EXAMINATION

1 removal work.

2 You go through iterations with comments back from both EPA
3 and from South Carolina DHEC. Then we do revisions and we
4 provide the document again in a draft, in a second draft form,
5 until they approve it. And then we can submit it as final.

6 And then that then allows us to go out and do the work.

7 Q. And when you say the work, are you talking about the work,
8 that portion of the work that was covered by the first ROD?

9 A. Yes. And in this case it's dealing with the shallow
10 groundwater and the soil removal.

11 Q. But in 1998 when you received the first ROD which had
12 deferred the issue of sediment remediation and the
13 intermediate groundwater, did you have any authority to act
14 with respect to intermediate groundwater or sediments?

15 A. No, we did not. Not without going through that second ROD
16 that they set us up for here, and then submitting another work
17 plan that addressed how we would conduct that work and got
18 their approval on conducting that work.

19 MR. FELMLY: Now, if could you bring up Exhibit 19,
20 Denise, the EPA fact sheet, please.

21 Q. What I'm showing you is a document called an EPA fact
22 sheet. And are you familiar with this document? It's
23 Exhibit 19.

24 A. Yes, I am.

25 Q. And just briefly, what is this instrument or what is this

THOMAS EFFINGER - DIRECT EXAMINATION

1 paper?

2 A. You can see the date on it is March '98, so this is in
3 advance of the Record of Decision being issued. This is an
4 opportunity for the public to comment and to come in and they
5 listen to EPA. I believe we also had an opportunity to speak.
6 But this fact sheet puts the information out there and it
7 advertises the public meeting date and it tells the public
8 exactly what's going to be discussed and how the meeting's
9 going to be conducted.

10 Q. And in terms of that public meeting date, is that --

11 MR. FELMLY: Let's try to bring that up, Denise, if
12 you can, where it has the date down in the center here. In
13 that little box.

14 Q. The public meeting days is March 16th, 1998.

15 A. Yes, sir.

16 Q. In part of the ROD that we marked as Exhibit 4, is a
17 transcript, is it not?

18 A. Yes, it is.

19 Q. And what is that transcript, sir, what's the purpose of
20 that transcript from your review of the ROD document?

21 A. Yes, sir, that transcript records the information that was
22 discussed at the public meeting and the comments that were
23 made. So it becomes a matter of public record as it's
24 attached to the Record of Decision.

25 MR. FELMLY: And just to save time, can I just

THOMAS EFFINGER - DIRECT EXAMINATION

1 approach the witness?

2 THE COURT: Sure.

3 BY MR. FELMLY:

4 Q. This is Exhibit 4, Mr. Effinger, and this is the first
5 page of that transcript. Is that March 16th, 1998?

6 A. The date at the top is March 16th, 1998.

7 Q. And you've seen this before. The gentleman that's the
8 current project manager of your site for the EPA, his name is
9 Zeller, is it, Craig Zeller?

10 A. Yes, but not at this public meeting.

11 Q. Was Mr. Zeller at this public meeting?

12 A. Yes, yes, he was at the public meeting.

13 Q. So the part -- describe, if you will, for the Court, how
14 community input and public information is acquired as it
15 relates to these proposals that the federal agencies dealing
16 with your company are.

17 A. It's one of the requirements under the superfund process,
18 and they have a community liaison type person that makes sure
19 that these things are held, and also sets up the
20 administration of it. But the idea is that EPA has to
21 communicate to the public about what's been found at the site,
22 what the issues are, and what the proposed remedy is, and get
23 their comments, input to it. And consider that prior to
24 issuing a Record of Decision.

25 Q. And leaving aside March 16th, 1998, when we got the

THOMAS EFFINGER - DIRECT EXAMINATION

1 transcript of that hearing, what's your knowledge about other
2 meetings or other information that's been disseminated to the
3 community about the superfund site and the cleanup there?

4 A. Well, all of the documents that are created were put in a
5 repository which was at the Charleston Public Library for the
6 public to be able to go review those documents. Things like
7 the remedial investigation, feasibility study, eventually the
8 ROD, and then the follow-up studies and the second ROD for
9 OU-2. All of those documents that are required to be created
10 under the superfund process have to be made available to the
11 public, and they do that by placing them in the public
12 library.

13 Q. Let me bring up Exhibit 23, which is entitled a unilateral
14 administrative order for remedial design and remedial action.
15 And this is a document --

16 MR. FELMLY: If we go to the last page of it, Denise,
17 if you can do that, we can find the exact date of that, if
18 you're able to scroll down to that. I'm looking for Bates
19 00874. Don't worry about that, I'll show it to the witness
20 here just to save time.

21 Q. On page 23 of this Exhibit 23 it indicates, does it not,
22 that on January 13th, 1999, this document was signed by Deputy
23 Director Green?

24 A. Yes, sir.

25 Q. And what is this document? This is now after the ROD.

THOMAS EFFINGER - DIRECT EXAMINATION

1 What is the unilateral administrative order for remedial
2 design?

3 A. Right. The Record of Decision captures the technology
4 that needs to be applied to the site and discusses the results
5 of the investigation and all of that. But then it leaves us
6 with here is your performance objectives that you have to
7 achieve, and here's the technology to be applied. But then
8 that's followed up with this enforcement piece, which the way
9 I would describe it really has the legal teeth to define how
10 we manage it, what deadlines we need to meet, what protocol we
11 need to follow, what the stipulated penalties are for not
12 being in compliance with the Record of Decision. Those kind
13 of matters. So it's a lot -- it has the same function as that
14 administrative order on consent that was signed back in '98
15 for the shallow soil removal and the dealing with the
16 Charlotte Street seep. This is the legal piece that enforces
17 getting the work done at the site.

18 Q. Now, on -- in 2002, a second Record of Decision, this one
19 is Exhibit 5 for operable unit two, was issued. Is that
20 correct?

21 A. Yes, sir.

22 MR. FELMLY: And, Denise, if you could go to the
23 third page of that document, actually the -- it's 508, would
24 be 28508; if you could bring that page up. And I guess
25 enlarge the second half of the page, if you would, so we can

THOMAS EFFINGER - DIRECT EXAMINATION

1 get the date.

2 Q. This is the second ROD, is it?

3 A. Yes, sir.

4 Q. And there have been a total of how many RODs for the
5 superfund site that you've been working to clean up?

6 A. There's been a two records of decision for the Charleston
7 site.

8 Q. So is this the Record of Decision that was described in
9 the document that we saw as the first ROD that was the one
10 that was referred to, to be coming along later?

11 A. Yes, it talked about an additional ROD that would be
12 issued for intermediate groundwater, surface water and
13 sediment. So this is that document.

14 Q. And this was issued when?

15 A. Well, you can see when it was signed, September 24th of
16 2002.

17 Q. What is the -- just from a summary point of view before we
18 dig into it a little bit, what is the summary, sir, of the
19 remedy that was chosen in this ROD for those portions of the
20 remediation and cleanup that were not addressed earlier in the
21 first ROD?

22 A. Okay. In a nutshell, with intermediate groundwater, it
23 was prescribed that we try to effect some removal, if there
24 was free phase tar in the intermediate zone that could be
25 captured, pumped and removed, and then along with that, trying

THOMAS EFFINGER - DIRECT EXAMINATION

1 some technologies to oxidize the dissolve phase contaminants.

2 And so you add a reagent to the subsurface under a control
3 reaction, it converts those organics into CO2 and water, which
4 renders them benign so they don't have the potential toxic
5 effects.

6 There was areas where it prescribed for us to do that in
7 the intermediate zone, and it left the door open for doing
8 repeat treatments.

9 With the sediments it talked about adding additional cap
10 to the sediments. There was recognition from studies and
11 reports from the study, and its contractors had done that,
12 some of the contaminated sediments, the majority of those
13 areas have been covered with a sand blanket that the City was
14 obligated to use to prevent those sediments from being
15 released to the environment and causing harm.

16 So in a way they had already -- they recognized that the
17 City and its contractors and the tour boat facility, the
18 National Park Service, the owner of that site, had already
19 employed a sand cap to hold those sediments down so that the
20 benthic organisms would not be exposed to it.

21 So then by this order we had to go back out, do some more
22 sampling of those sediment areas to see where the cap still
23 existed. We had to measure free available organic carbon in
24 the sediments, which would mitigate any toxic effects of the
25 sediments, and then determine where additional capping was

THOMAS EFFINGER - DIRECT EXAMINATION

1 required. So it talks about this in a general term.

2 MR. FELMLY: Denise, if you could please go to page
3 8506 at the bottom of the page, couple pages back and bring
4 that up.

5 Q. This is part of the sort of opening introduction to this
6 document, and I want to focus your attention on the lower
7 portion of this description of the selected remedy. It
8 references the earlier ROD. A Record of Decision ROD for
9 operable unit number one at the CPA site was issued by the EPA
10 in September 1998. The OU-1 ROD addressed NAPL source areas,
11 shallow groundwater impacts and impacted soil. The impacted
12 soil removal action has been completed, along with significant
13 NAPL removal and initial shallow groundwater treatment
14 activities. Remedial actions to address the remaining NAPL,
15 shallow NAPL source areas and shallow groundwater impacts --

16 MR. FELMLY: And if you could go over to the next
17 page, Denise --

18 Q. -- will continue concurrent with the implementation of the
19 selected remedy for OU-2.

20 Can you explain to us what you understood to be the plan
21 as they described the interaction between OU-1 and OU-2?

22 A. Well, they were recognizing that we hadn't completed all
23 the work required by OU-1, and we hadn't even decided for some
24 of the areas where that still had source, what needed to be
25 done there.

THOMAS EFFINGER - DIRECT EXAMINATION

1 When we had dug the excavations inside the substation, we
2 recognized those areas where we could not dig because of
3 surface equipment, electrical equipment, Charlotte Street, and
4 then Concord Street. And then a feeder bay at the back. So
5 we recognized there were areas where we couldn't dig and
6 couldn't get to. So we put in a recovery system. And the
7 recovery system was designed to capture tar that would move
8 through the site and may move from those areas which still
9 contained tar back towards where we had dug.

10 So we put in a trench system, we put some six- and
11 eight-inch wells into the clay, we sumped it into the clay
12 with the cap on the bottom. A large slot size for the tar to
13 then, if it flowed back, it would flow into these wells where
14 it would collect in the deeper collection well.

15 Once again in the well, then we came up with some pumps
16 that were able to remove that material, and that's what we
17 started removing after we completed the excavation work inside
18 the substation.

19 So we started pumping that tar out and got better and
20 better at it as we gained expertise. And got to the point
21 where we were removing about 400 gallons a month.

22 Since that time we've removed about 23,000 gallons of pure
23 tar. We shipped that off to be recycled in a fuel mixing
24 operation, fuels blended and then used as a fuel. But
25 23,000 gallons of tar was a significant removal, you know,

THOMAS EFFINGER - DIRECT EXAMINATION

1 after the 63,000 tons of impacted soil and debris had been
2 removed.

3 So that's still ongoing. The regulators expect to us
4 continue that, and we are continuing that. As we have other
5 areas available to excavate, either through work of other
6 folks or by the City, we remove that soil, too.

7 So all of that associated with the shallow groundwater
8 from OU-1 is still ongoing, and the regulators still have the
9 ability to require us to do more work in those areas.

10 Particularly back at the main gas holder where we have not
11 been able to apply a technology other than putting a pump that
12 draws off the bottom of that holder and is removing tar. Some
13 of that tar being counted in the 23,000 gallons removed to
14 date.

15 Q. Now, in addition to the things you just described that
16 really are still in process apart from OU-1, does the section
17 we see here on the screen indicate the following major
18 components of the selected remedy for OU-2, in other words,
19 the new information that they have provided you to perform as
20 a remedy?

21 A. Yes, sir.

22 Q. And just quickly on these there's an indication of
23 continuing to remove NAPL in the first one of these, and
24 talking about stationary or portable pumping equipment. Is
25 that the pumping you were just talking about?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. Yes, after seeing the success that we gained with the
2 shallow zone for the wells and actually demonstrated some tar
3 in them, they told to us try and remove that. And we did
4 install two larger wells, some six-inch wells, because the
5 larger the diameter of the well, the more tar that can collect
6 in it. A two-inch well wouldn't hold very much. But with the
7 larger six-inch wells, we put those in to see if tar would
8 collect in them, and we removed those. And that's in a couple
9 of locations.

10 We had some other groundwater monitoring wells, there was
11 one back at the gas holder that's presumed to be in the
12 intermediate zone. It's actually in the loose fill around the
13 holder, and we're removing tar from that well. But it's a
14 little bit here and there, it's a batch recovery.

15 Again, the lion's share of all that tar I mentioned is
16 coming from the shallow zone, but they did ask us to go after
17 that.

18 Q. The second bullet item under the new portion of the
19 selected remedy talks about in situ treatment of impacted
20 groundwater, and goes on to talk about this dissolved oxygen
21 concentration. You mentioned that a little bit before, but
22 could you just briefly describe what this program is and
23 describe how you use oxygen to try to break down tar?

24 A. Yes, sir. In situ means for treating the groundwater in
25 place, and monitoring it, and this in situ treatment uses a

THOMAS EFFINGER - DIRECT EXAMINATION

1 hydrogen peroxide as the oxidant. It has some other catalysts
2 that you need to add to make the reaction move forward. And
3 it's designed to convert the dissolved phase organics back to
4 less benign products, back to CO₂ and water at its complete
5 reaction stage. It's supposed to have a little bit of
6 efficacy with the tar, but you would have to add so much of
7 that material to be effective with the tar, it's pretty
8 difficult, and you just can't push that much material into the
9 ground. It's like trying to push, you know, ten pounds into a
10 five-pound bag; you just can't do it.

11 So you let the reaction take place. And in most cases the
12 areas that we treated it was about a two-week period for it to
13 occur. You monitor the reaction, and then you go away. There
14 is some subsidence of the reaction over time. The increased
15 oxygen in the aquifer increases the biological activity, and
16 the organisms have some ability to chew up those organics and
17 make them less benign.

18 So we had to actually do it twice at the Charleston site,
19 and then monitor what happened afterwards.

20 Q. And the principal impact is not on the tar itself, but the
21 constituents that have leaked out into the groundwater and
22 dissolved in the groundwater?

23 A. It's on the dissolved phase, but the belief is there's
24 less mass of tar in the intermediate zone than what we're
25 seeing in the shallow zone. So we're really trying to speed

THOMAS EFFINGER - DIRECT EXAMINATION

1 up the cleanup of the -- of that dissolved phase to try to
2 manage.

3 Q. And then down at the bottom of this list talks about these
4 sand blankets that you were referencing, and a discussion
5 about the sand blanket may be augmented, depending on the
6 supplemental total organic carbon and PAH data.

7 What actually ended up happening with respect to the
8 sediments and the management of the soils on the edge of the
9 river?

10 A. Well, to comply with this, we had to go back out there
11 with equipment and a Vibracore, which is another boring device
12 that you use that's mounted to a kind of a platform kind of
13 boat. And use the Vibracore to see where the sand blanket was
14 and how thick it was and what the underlying sediment looked
15 like, and do an analysis on that sediment for the
16 contaminants, and then also for the organic carbon. And
17 there's an equation to use the organic carbon and evaluate
18 what the ecological impacts would be.

19 But coming out of that analysis, you identify the areas
20 that could have potential impact, and also do not have a
21 sufficient two-foot thickness of sand blanket. And so then we
22 were required to go back and add to that. Add to the sand
23 blanket where it wasn't thick enough, and evaluate if there
24 was additional areas based upon the calculation where you may
25 have impacts to the aquatic organisms.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. And is all of the work on the sediments on the river
2 complete today?

3 A. It is for two areas. There's one remaining area that's at
4 the end of Charlotte Street, and it's the same kind of design
5 there that we had had issued in our work plans, but that
6 because the City is installing a park at the end of Charlotte
7 Street which will have an observation deck, all the people
8 involved, all the stakeholders realize we would not be able to
9 put this extra cap out there before the City would need to
10 drive piling through it for their observation deck, and
11 disturb that cap. So then we'd have to manage it all over
12 again.

13 So what was agreed was that we would integrate, you know,
14 their building of that observation deck associated with the
15 park, we would dovetail that with what we were doing to the --
16 to cap the sediment.

17 So the final design's going to look like we'll go out
18 there, we'll put down some sand to hold the sediment down,
19 then they'll drive their piling through it, then we'll come
20 back and put some geotextile around the pilings that they have
21 in place so that we can put rip rap on top of it to hold that
22 sand down, so that the sand would not be dispersed by natural
23 forces later on, either hurricanes or what have you that could
24 disturb it.

25 Q. What's the time frame that -- in light of the coordination

THOMAS EFFINGER - DIRECT EXAMINATION

1 of the City, what's the order of magnitude of the time frame
2 when this work that will eventually complete the sediment
3 portion of the river is likely to be done?

4 A. Well, the City is -- has been working on its funding for
5 this for several years. And we had hoped that they would have
6 done it a couple of years ago, but that hasn't occurred yet.
7 I'm hopeful it will be within the next two years.

8 MR. FELMLY: Let me, Denise, if you could go to the
9 bottom of this page under statutory determinations and bring
10 that up.

11 Q. There's a section of this portion of the second ROD that
12 says because uncertainty exists regarding the availability of
13 the selected remedy to achieve the groundwater target cleanup
14 roles due to the presence of residual NAPL in the intermediate
15 zone, a phased approach has been selected. The phased
16 approach consists of removal or treatment of NAPL DNAPL to the
17 maximum extent practicable, followed by containment of
18 potentially nonrestorable source areas and restoration of the
19 aqueous constituent plumes. That's quite a mouthful.

20 Can you explain for us and the Court what that is saying
21 and what your understanding of what it's saying in terms of
22 this phased approach?

23 A. Yes, sir. Again, we're seeing this same three objectives
24 that they had in the Record of Decision for OU-1, which is
25 remove source to the maximum extent, containment of the areas

THOMAS EFFINGER - DIRECT EXAMINATION

1 where you can't remove the source, and then restoration of the
2 aqueous constituent plumes, which is what has been dissolved
3 from the tar. So you've got those three objectives.

4 And then the phased approach is let's try this Fenton's
5 reagent, this oxidant technology to try and destroy the
6 dissolved phase that's in the intermediate zone and see how it
7 responds.

8 We -- like I said, we went through one iteration with
9 that, we had to come back six months to a year later and
10 re-treat the areas, and we're continuing to monitor to see how
11 the intermediate groundwater contamination responds to that.
12 Again, trying to achieve drinking water standards.

13 Q. In terms of the work and investigations that were done
14 between the first ROD in '98 and the ROD that gets issued in
15 September of '02, and you've indicated a number of
16 investigations were undertaken. Is there a breakdown of -- in
17 this second ROD that -- at page 513, that we can bring that
18 up, I think where it may be of what those investigations
19 consisted of? Is there a summary of them?

20 A. Yes, sir, I believe that there was, where it talks about
21 the two different records that were submitted. One for
22 intermediate groundwater and then one regarding the sediments.

23 Q. So at the bottom of page Bates stamp 513 there's a
24 discussion, and we're going to go over to the next page, of
25 some of the investigations done in '98 and '99.

THOMAS EFFINGER - DIRECT EXAMINATION

1 MR. FELMLY: And then if we can go to the next page
2 at the top, Denise.

3 Q. Are these additional investigations and testing,
4 monitoring that was undertaken in the interim between the two
5 RODs leading to the second ROD?

6 A. Yes, sir, what you've captured here talks about the
7 additional work that was done for intermediate groundwater,
8 early and later in the year 2000. And then follow-up
9 intermediate groundwater assessment done by a couple of
10 different contractors, to evaluate.

11 And in this situation we were looking at areas that were
12 upgradient from our gas holder, so they would be in a
13 hydraulic sense you would be upstream from where the
14 groundwater flow was typically expected to go. So we were
15 trying to elicit what was causing these accedences up there.
16 We did see evidence of tar, we saw a lot higher concentrations
17 of benzene. So we were looking at whether or not there was an
18 additional source.

19 And then there was some predesigned characterization work
20 done by management and technical resources and Ish, to talk
21 about how we would manage these other areas for intermediate
22 groundwater.

23 MR. FELMLY: Now, if I could turn to page 517 at the
24 middle of the top, just above the middle of the page, that
25 paragraph, Denise, that's just above the center part of the

THOMAS EFFINGER - DIRECT EXAMINATION

1 page, right there.

2 Q. It references the unilateral administrative order that we
3 marked earlier. Then it says, since March 1999, EPA and SCE&G
4 have resolved technical disagreements regarding the ROD for
5 OU-1. Currently, SCE&G has implemented significant DNAPL
6 removal activities for OU-1 within the shallow zone and
7 conducted additional assessment activities for OU-2. If
8 necessary, an explanation of significant differences will be
9 prepared for OU-1 to resolve any significant discrepancies
10 between the ROD and the final remediation plans.

11 What were the disagreements or the issues involving the
12 agencies, and I guess yourself, in connection with the matters
13 described in this paragraph?

14 A. Well, starting back with the preparation of the initial
15 Record of Decision for OU-1, there was a lot of discussion
16 around conventional technology which was -- is to run a pump
17 and treat system. You know, you keep pumping water out of
18 these wells and you keep treating it until you don't get any
19 more dissolved phase coming out of your wells.

20 But we determined early on that because of the magnitude
21 of the tar that was there, that was going to take an extremely
22 long time, if not forever.

23 So what we did instead was go after removing that source
24 area. And folks were generally happy with that result. The
25 regulators, I believe, were extremely happy about what we were

THOMAS EFFINGER - DIRECT EXAMINATION

1 seeing in those groundwater monitoring wells further out from
2 the site as we removed the source areas, and they saw the
3 plumes starting to shrink. So they were extremely pleased
4 with that.

5 But because we had not achieved the drinking water MCLs,
6 there was still some discussion about whether or not we needed
7 to install and operate a pump and treat system.

8 Here, I think you see EPA is recognizing the benefit of
9 what we have done, and that it was in the best interests and
10 it helped move the cleanup along much faster than it would
11 have otherwise. And they're considering whether or not they
12 need to issue the ESD. If there had been extreme differences,
13 they would have issued a ROD amendment, which they're not
14 proposing here. But an ESD kind of clarifies the work that
15 was done and how EPA and the regulators believe it's
16 consistent with the requirements in the original Record of
17 Decision for OU-1.

18 Q. Now, we're going to get to the ESD. Was an ESD ever
19 issued?

20 A. Yes, it was.

21 Q. We'll get to that in a minute.

22 MR. FELMLY: Denise, if you could go back to the page
23 and pick up the middle of the page where it says community
24 participation, if you would, please.

25 Q. Just quickly, does this paragraph describe the various

THOMAS EFFINGER - DIRECT EXAMINATION

1 steps that the agency took to publish and provide notice and
2 have a public comment period and have a public meeting with
3 respect to the information that ultimately is utilized in this
4 ROD?

5 A. Yes, it does. Just like the same process they went
6 through on the ROD for OU-1, again, they have to go back to
7 the public, talk about these issues, explain to them what was
8 found, and talk about what they're requiring to be done.

9 MR. FELMLY: And, Denise, if you could go to the
10 bottom of this same page and pick up that paragraph, and then
11 I'm going to take you over to the other page.

12 Q. This paragraph addresses to some degree the
13 interrelationship of the two RODs. And at the bottom of it --
14 well, first of all, it obviously bullets out and indicates the
15 two areas they deal with. But it says at the bottom, EPA has
16 already selected the remedy for operable unit number one in a
17 ROD issued September 30, 1999. And then it says the remedy
18 for OU-1 was selected under the authority of CERCLA, and
19 was -- if we can go over -- consistent with the requirements
20 of the National Oil and Hazardous Substances Pollution
21 Contingency Plan. That's the NCP, right?

22 A. Yes, sir, that's the -- we call it the National
23 Contingency Plan.

24 Q. And then it goes on to say at the end of that paragraph,
25 remedial actions to address remaining shallow DNAPL source

THOMAS EFFINGER - DIRECT EXAMINATION

1 areas and shallow groundwater impacts will continue concurrent
2 with the implementation of the selected remedy for OU-2, which
3 phrases what you said before that you were going to continue
4 that work.

5 A. That's correct.

6 Q. Now, the last thing on this is that if you go down to
7 what's going to happen with OU-2, and we stay at the bottom of
8 that second paragraph it again says, OU-2 continues the phased
9 approach for groundwater cleanup through the removal and
10 treatment of NAPL to the maximum extent practical, followed by
11 containment of the nonrestorable NAPL source areas and
12 restoration of the aqueous phase plume.

13 Language we've seen before, but they're staying on course
14 with respect to that goal.

15 A. Right. Right. With that whole process of removal.

16 Q. Now, at the time the first ROD came out, did you know what
17 was going to be adopted with respect to the in situ
18 oxygenation program that has been used in OU-2?

19 A. No, we did not. We hadn't even done all the investigative
20 work to identify the areas, the extent of the contamination,
21 and where it was vertically.

22 Q. And in discussions at that time with the agencies, what
23 were the options, other than the oxygen system that were
24 primarily being kicked around and discussed?

25 A. In 1998 or 2002?

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. '98.

2 A. In 1998, I believe that technology was fairly new at the
3 time. I don't know that it had been tried in a manufactured
4 gas plant. This is with the Fenton's reagent, the in situ
5 chemical oxidation, or ISCO, as we sometimes call it. But it
6 was fairly new technologies. Hadn't been used.

7 We talk about pump and treat on the intermediate zone, we
8 talked about a lot of other things, but the real key was the
9 agencies felt like we had not completely delineated the area
10 of impacts in the intermediate zone. So they were holding
11 that until we could at least identify them and understand the
12 extent and the concentration of contaminants in those -- in
13 the intermediate zone.

14 MR. FELMLY: If you could go to page 8544, Denise,
15 and the first paragraph in the bottom section right there.

16 This is under ecological risk assessment. There's a
17 reference here that based on findings presented in this
18 interim report on ecologic risk assessment dated April 2002,
19 surface water has been eliminated as a medium of concern for
20 both the former Charlotte Street seep and the brick archway
21 areas.

22 Did they go back and redo the ecological risk assessment,
23 the sort of human risk assessment, after the first ROD?

24 A. I don't believe they redid the human health risks, but
25 when we were dealing with sediments and surface water they

THOMAS EFFINGER - DIRECT EXAMINATION

1 were focused on the ecological risks and that would be the
2 risks to the organisms that would be impacted in the Cooper
3 River. So we had to -- we had to follow this protocol as
4 directed by EPA to evaluate those risks and to come up with,
5 again, that calculation that evaluated the cancer effect as
6 well as the hazard quotient and that would be the other health
7 effects you could have from contact with the constituents.

8 Q. Now, in the Record of Decision we just went through, the
9 second Record of Decision, and I won't go through all of them,
10 are there numerous references to the removal of NAPL by
11 excavation?

12 A. In the second ROD?

13 Q. Right.

14 A. I believe there's -- it's referring back to OU-1, if
15 that's what you mean, it refers back to what was done to get
16 us to where we were with OU-2. I think there's a whole
17 section titled previous actions at the site. Previous
18 activities.

19 Q. And in particular, what that's referencing is the removal
20 of NAPL by excavation.

21 A. Yes, sir.

22 Q. There then is issued an explanation of significant
23 differences, and you talked a little bit before about that.

24 MR. FELMLY: And, Denise, if you could bring that up,
25 this is a document bearing November 2005 date. It's

THOMAS EFFINGER - DIRECT EXAMINATION

1 Exhibit 6. And if you could center on the left, for the
2 moment, the left column, Denise, right in that area there.
3 Bring that up larger. Thank you. And perhaps I think bring
4 that up in paragraphs, Denise, because it's still very hard to
5 read. That's fine.

6 Q. It says this ESD clarifies the remedial cleanup as it has
7 been implemented at the site and explains how it differs from
8 the description that is contained in the OU-1 ROD. The
9 modification does not fundamentally change the selective
10 remedy but provides an alternate method for achieving and
11 maintaining the performance standards.

12 In what way, as you understood it, did the modifications
13 illuminate or change the remedy that originally had been
14 selected in the OU-1 ROD?

15 A. Okay. EPA felt like it was necessary to issue this
16 because of -- even though we achieved the objectives of
17 removal of NAPL, removal of source to the maximum extent
18 practicable, we had done it with excavation. The original ROD
19 talked about extraction wells, although it never really shows
20 you where to place them, how many to place and all of that.

21 We found additional source areas outside of what was
22 originally known when the ROD for OU-1 was issued. So we
23 found that area next to the Luden's building, along Charlotte
24 Street. So there was source areas downgradient of Concord
25 Street. And this whole removal using excavation, the agents

THOMAS EFFINGER - DIRECT EXAMINATION

1 here, EPA was recognizing it was actually much better at
2 removing the source material. It didn't exactly use
3 extraction wells, but it did achieve their first objective,
4 which was to remove NAPL to the maximum extent practicable.
5 So they talk about it here.

6 They also, later on in this document, talk about the
7 groundwater that was managed as a result of doing that
8 excavation. And then the three million gallons of water that
9 was treated and released. So they're really saying you
10 achieved our objectives, you did it a little bit differently
11 than we thought, but overall we think it's probably been much
12 better and more efficient. So --

13 MR. FELMLY: Let me go over to the second page,
14 Denise, if you could take us over to page 4880 on the Bates
15 stamp reference, and highlight the section in the middle left
16 of the page. That's fine.

17 Q. Now, in the middle of paragraph of that it says that
18 concurrent with site-wide redevelopment, a significant volume
19 of NAPL was removed during excavation of over 63,000 tons, and
20 impacted materials and debris from the shallow groundwater
21 bearing zone. Additionally, during the excavation activities
22 a perimeter collection and recovery trench was installed with
23 over 50 NAPL recovery wells. This NAPL recovery is ongoing to
24 date and over 14,000 gallons of free product, parens, coal
25 tar, have been collected, removed and disposed of.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Is that the modification that you were referencing, sir?

2 A. Yes, sir. It is giving us credit for doing that removal
3 and then also installing that perimeter collection and
4 recovery trench. So --

5 MR. FELMLY: If you could go to the bottom of the
6 page, there's one more paragraph, Denise, below that down at
7 the bottom. Thank you.

8 Q. Is this where they're describing what you were just
9 saying, that there has been improvement in the groundwater
10 plumes as a consequence of what you've done?

11 A. Yes, sir. As we've removed tar in those -- the furthest
12 areas away from the site closest to the Cooper River, and
13 worked our way back towards the electric substation, we've
14 also seen the dissolved phase plume shrink in size and move
15 back towards -- the perimeter is moved back towards the
16 electric substation. And so most of the areas east of Concord
17 Street, which would be closest to the Cooper River, are now
18 meeting drinking water standards. In that shallow zone.

19 MR. FELMLY: And finally on this document, Denise, if
20 you go to the right column to the bullets at the top, please.

21 Q. It describes some of the focus source mitigation efforts,
22 and I think you mentioned one of them, which is that it
23 referenced the fact that you had taken three million gallons
24 of contaminated water out of there and cleaned it?

25 A. Yes, sir, it does.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. And it references the use of the oxygenation products
2 during backfilling of excavations, is that right?

3 A. I don't think I had mentioned that, but there is another
4 oxidant that's available in a powdered form, and it releases
5 oxygen when it's in contact with water.

6 But when we put in the clean backfill, especially on the
7 perimeters of the areas that we excavated, we would add this
8 oxygen release compound, kind of a white powdery substance,
9 but we would kind of blend it and put that back into the hole,
10 so that where it was in contact with groundwater, it would
11 help expedite the cleanup of the groundwater for any kind of
12 little residual that might be left behind.

13 Q. And that's different than the other oxygen injection
14 process with the Fenton's reagent that you were talking about?

15 A. It has the same function, but it's a little different
16 product that you're placing into the ground, and you're using
17 a different method to get it into the ground, yes, sir.

18 Q. Now, in terms of the work that's discussed in the ESD, the
19 63,000 tons of impacted soil that was removed with tar in it,
20 and the gallons, three million gallons of water, is this the
21 work that is covered in the ESD that you talked about before
22 to the Court about how the EPA was on site and you know this
23 was occurring?

24 A. Yes, they knew all along what was going on, how it was
25 being managed, and advising us, giving us their input, and if

THOMAS EFFINGER - DIRECT EXAMINATION

1 there was any disagreement, they would let us know about it.

2 Q. The next exhibit in this story -- we're coming towards the
3 end -- is Exhibit 24. And Exhibit 24 is entitled a unilateral
4 administrative order for remedial design and remedial action.
5 That's a 2003 document, Mr. Effinger. What is that instrument
6 or what does that do?

7 A. Again, just like we had seen before in the ROD for OU-1,
8 this then is the enforcement piece that EPA uses to require us
9 to do the work, stipulate penalties if we don't do the work,
10 identify the deadlines for getting the work done, talk about
11 the protocol for sending and receiving information. So all of
12 those administrative things, and enforcement things that go
13 along with the requirements that are in the ROD for OU-2.

14 Q. So this is the sort of authorizing document that gets you
15 going on doing the work that's in the OU-2 ROD?

16 A. Yes, sir, but just like before, now we have to prepare a
17 work plan and get their approval for us to go out and do the
18 work. And in the work plan we describe what we're going to do
19 in more detail on how we're going to do it. So that they can
20 make sure it's compliant with their Record of Decision, they
21 have to approve it, and there might be a couple of iterations
22 before we go out there and do the work.

23 For OU-2 we elected to divide that up into two pieces. So
24 we wrote a work plan for the intermediate groundwater work and
25 we wrote a separate work plan for managing the sediments.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. And after you write a work plan like that, do you get
2 feedback from them as to whether it's acceptable or not?

3 A. Yes, we do, and there's oftentimes many revisions to that.
4 There will be a draft and then resubmittal, and then the other
5 agencies, particularly with sediment, had a lot of input to
6 that. The Park Service was very concerned about how our
7 remediation or -- and how our capping work over near their
8 tour boat facility might impact the boat traffic coming in and
9 out to the piers that they had there. So they had input to
10 it. As well as the folks at the Aquarium concerned about how
11 it might look or how it might affect their exhibits.

12 MR. FELMLY: Denise, if you could bring up Exhibit 7,
13 which is -- if we could bring up the title so we can see what
14 it is clearer.

15 Q. This is the interim remedial action report, operative unit
16 number one, remedial action and removal action completion
17 report for the Calhoun Park site.

18 Is this a document that in your profession is sometimes
19 called an IRA?

20 A. Yes, sir, it is.

21 Q. And this IRA was issued in August of 2006, is that right?

22 A. That's correct.

23 Q. And that's something that -- Who prepares this and who
24 submits this?

25 A. It was prepared on our behalf by Management Technical

THOMAS EFFINGER - DIRECT EXAMINATION

1 Resources, and they were our consultant. They were involved
2 in the removal, in the cleanup work that took place for OU-1.
3 This is a document, how much soil was removed, where it was
4 removed from, where it was shipped to, they have all the
5 attachments with the manifest, the weigh tickets, all of that
6 information including, you know, pictures, descriptions,
7 history, all of that to kind of summarize the work after it is
8 done, to convey to the agency.

9 In this case it's called an interim because we recognized
10 that work was still going on, but it was something that the
11 agencies requested from us to kind of ramp up the soil removal
12 work, and then the source removal work conducted for OU-1,
13 even though we were still pumping tar from those perimeter
14 trenches under another plan, the site-wide DNAPL removal plan.

15 Q. Well, this is -- this document, Exhibit 7 that I have, the
16 IRA here, is several hundred pages long, and I'm not certainly
17 going through very much of it. But did you receive word back
18 from the EPA as to whether after their review of the document,
19 they approved it or not?

20 A. Yes. You have to get concurrence from both EPA and the
21 State. The State will voice their opinion to EPA who wrote
22 the official letter to approve that document.

23 Q. And we're going to come back to the IRA in a minute, but
24 let's just deal with Exhibit 8.

25 This is a letter from Kenneth Lucas, the remedial project

THOMAS EFFINGER - DIRECT EXAMINATION

1 manager, bears a date of October 19, 2006. It's to you. What
2 is this letter, sir?

3 A. This is the actual letter which approved that interim
4 remedial action report that we were just discussing. Ken
5 Lucas is the third project manager coming in after Terry
6 Tanner changed responsibilities.

7 Q. Now, in this letter, in the second paragraph they talk
8 about continuing obligations will be met by implementation of
9 the ongoing remedial action for operative unit number one.
10 And I gather they're saying you still have to do the work that
11 operative unit required, right?

12 A. Right, they're recognizing that there's still tar out
13 there in certain areas that we couldn't get to. Primarily the
14 biggie is at the gas holder, which we couldn't get to, and has
15 yet to be determined what is the final resolution or the final
16 work that we need to do there.

17 And then also other areas that were inaccessible, like the
18 Ports Authority, and then going on back toward that feeder
19 bay.

20 So equipment that comes out, if we have the opportunity to
21 go in there and remove it, they're expecting us to do that.
22 And they're expecting to us continue the dialogue on what we
23 need to do with that gas holder area.

24 Q. Other than the work that still needed to be performed as
25 part of the earlier order, were there any other

THOMAS EFFINGER - DIRECT EXAMINATION

1 qualifications, criticisms or nonapprovals in the action taken
2 by Mr. Lucas and the EPA?

3 A. Not to my knowledge, no, sir.

4 Q. If, based on your experience and your years of work in
5 connection with these remediations, if the EPA had a concern
6 about something in the IRA or didn't agree with something,
7 what's the process they would follow in this type of
8 situation?

9 A. Well, they have the authority with those unilateral
10 administrative orders to send us a notice of deficiency, and
11 then to impose fines that you incur per day, per deficiency.
12 So they have an enforcement mechanism, if we are not meeting
13 their requirements.

14 Q. All right. Now, going back to the IRA, I do have some
15 items on that I want to discuss.

16 If you go to page 356, the Bates stamp 356, at the bottom
17 of the page there's a section called explanation of
18 significant differences. In this portion of the document does
19 the IRA set out the interaction of the ESD and the original
20 ROD and some of the information you earlier gave us about the
21 way in which various aspects of that was reconciled?

22 A. Let me read through this. The -- yes, it does. And
23 again, the IRA is a document we wrote, and so we're going
24 through the process and trying to explain it here.

25 Q. I understand you wrote it, but then you submit it to

THOMAS EFFINGER - DIRECT EXAMINATION

1 Mr. Lucas and he approved it?

2 A. Yes, sir.

3 Q. And in addition, I'd like to go to page 357, which is a
4 section of the IRA called approvals and inspections and
5 regulatory oversight. Again, this is your contractor on your
6 behalf describing this, but I want to focus on the description
7 in the second paragraph of this section where it says, for
8 phase one, the soil removal and seep mitigation work, the EPA
9 on-scene coordinator or his representative was on site daily.

10 Now, I'm not sure we've talked about what an OSC is.
11 We've talked about what a remedial project manager is. What's
12 an on-scene coordinator?

13 A. The on-scene coordinator is the immediate response guy out
14 of EPA. And in this case it was Steve Spurlin. But it's his
15 job, if you're doing an urgent mitigation or soil removal, to
16 come and observe that and more or less supervise the work, or
17 make sure that the work is compliant with their requirements.

18 Q. And then it goes on to say, for many other source removal
19 activities the EPA remedial project manager was also on site.
20 And that would be the person who at least now would be
21 Mr. Zeller and earlier was Mr. Tanner and others.

22 A. That's correct. Although in his role he's not required to
23 be there daily, but in most cases with Terry Tanner, he was on
24 there a great deal of the time when we were actually doing the
25 digging.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. And then it says, additionally, project status meetings
2 and site inspections were conducted at the site with the
3 regulatory agencies. As appropriate, approval dates are cited
4 within this report, and a copy of the approved correspondence
5 is included in Appendix A.

6 This portion of the report describes the interaction and
7 oversight from the point of view of SCE&G and your contractor
8 with the EPA.

9 A. That's correct.

10 Q. Did anybody ever come back and either suggest corrections
11 to this or any changes to it from the EPA?

12 A. There may have been some minor tweaks to it by the
13 agencies, but as you see it here, it was fully approved by the
14 agencies.

15 Q. And what about the statements that relate to the fact that
16 EPA representatives were on the site, did anybody --

17 A. Oh, no, nobody challenged that. And Appendix A then is
18 the repository of all of those approval letters.

19 Q. And then if we move down to the next paragraph, which is
20 called removal action overview, again we've seen this number
21 before. This is where the description of 63,000 tons of
22 impacted soil and sediments and materials impacted with
23 presumably NAPL is discussed in this IRA, is that correct?

24 A. That's correct.

25 Q. It talks about during excavation activities over 31 --

THOMAS EFFINGER - DIRECT EXAMINATION

1 3,100,000 gallons of water were removed and transferred to
2 treatment facilities. So all of that is set out in this IRA
3 as part of the report?

4 A. Yeah, the report's purpose is to pull all that together
5 and document what was done and make it a part of the record.

6 Q. That -- there are a number of other documents, these
7 are -- let me just strike that.

8 We've talked about some of these documents as being
9 milestone documents, some of them are perhaps less important.
10 Is the IRA one of the milestone documents, do you think?

11 A. Typically it is. It captures everything that was done at
12 the site. But here it's -- you can see it's still an interim
13 document, so we still have work that's left to do. But
14 because of the time that the work was implemented, EPA felt it
15 best to go ahead and capture it here. So at least in a
16 segmented fashion, you know, kind of matching the phased work
17 that was done, it would kind of, you know, tie that phase
18 together.

19 Q. I have two more things, Mr. Effinger, that I want to --
20 two topics that I want to address with you. One is to go
21 through what studies and various actions are ongoing now, to
22 the extent we haven't already talked about them, and then the
23 last topic would be matters related to the calculation of the
24 costs that you have incurred. And let me do the first one,
25 which will not require as much detailed review of the

THOMAS EFFINGER - DIRECT EXAMINATION

1 documents.

2 MR. FELMLY: Exhibit 20, Denise, you would bring that
3 up.

4 Q. Is something called the tenth DNAPL removal report, and
5 that document is what?

6 A. After we put in those -- that recovery well trench, we had
7 a site-wide DNAPL removal plan, which was approved. But this
8 is a semiannual report that we prepare to document how much
9 tar has been recovered and what process has been used and to
10 try to evaluate how the system is responding. So it gives the
11 EPA and the regulators an opportunity to see where things are
12 progressing and what's going on with that removal program.

13 Here on this one I can read it, it's we're at
14 19,600 gallons of tar that's been removed. And this was from
15 through November of '06. So to date we're at about
16 23,000 gallons of tar removed.

17 Q. And you continue to do these reports, is that correct?

18 A. Yes, sir.

19 MR. FELMLY: If you could bring up Exhibit 10,
20 please, Denise.

21 Q. This document is entitled a five-year review report, and
22 is this related to work with the Army Corps of Engineers?

23 A. Yes, it is. The five-year review report, as Ken Lucas
24 came into the project, there was discussion between he and the
25 State that a five-year review needed to be conducted. There

THOMAS EFFINGER - DIRECT EXAMINATION

1 was some debate about that, but he elected to proceed. And so
2 he commissioned the Army Corps of Engineers, and that's who Ed
3 Hanlon works for, to do a five-year review of what had
4 occurred at the site. It's still in a draft form that's not
5 been finalized.

6 Q. But this still involves differing agencies making comments
7 on this remediation?

8 A. Yes, it does.

9 MR. FELMLY: Denise, if you could bring up
10 Exhibit 16.

11 Q. Now, this document is entitled a draft, it's a technical
12 memorandum assessment of vapor intrusion.

13 First of all, what does vapor intrusion refer to?

14 A. Again, as the new guy came in after Ken Lucas left, then
15 Craig Zeller came in and started looking at a lot of issues
16 that needed to be at least closed out before we started
17 getting into a technical impracticability waiver. And one of
18 those was an evaluation of vapor intrusion.

19 What that is, is if you have groundwater or soils beneath
20 a structure, then vapors could escape from underneath the
21 structure and potentially cause a vapor environment inside the
22 building that would affect -- it would affect people.

23 So we had to go back and evaluate it under new vapor
24 intrusion guidance that is out there within EPA and the State
25 regulators.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. And has that report -- what does that report in summary
2 indicated with respect to the issue of vapor and the
3 possibility of it getting into structures?

4 A. Again, it's a thick record. We initially -- we finally
5 submitted it in February of this year, but it talks about
6 different exposure pathways, different contaminants, different
7 media, whether it's groundwater or soil. And the surrounding
8 buildings. And it evaluates all the different areas for how
9 much vapor could come into those buildings, what the
10 concentration might be. And then it does a risk assessment
11 like we had talked about before, to evaluate what the
12 potential cancer impacts might be, or what the human health
13 exposure issues might be.

14 MR. FELMLY: Exhibit 17, if you could bring that up,
15 Denise, please. The intermediate groundwater report. This is
16 coming into the current time frame, this is November of 2008.

17 Q. Can you describe for the benefit of the Court what this
18 report is and what its significance is?

19 A. All right. As a result of implementing the in situ
20 chemical oxidation required by the ROD, the Record of Decision
21 for OU-2, then you have to do follow-up monitoring to see
22 whether or not it's been effective.

23 And so that follow-up monitoring has continued, and it's
24 still going on, on nine-month intervals, to report the
25 constituent levels in the surrounding intermediate groundwater

THOMAS EFFINGER - DIRECT EXAMINATION

1 wells, to see if the concentrations are decreasing in response
2 to the chemical oxidation treatment that was employed there.

3 Q. At -- that will next be done approximately when?

4 A. Since this is in June of '08, the next event would be in
5 September '09. Excuse me, March of '09.

6 Q. On the subject of monitoring or assessment or looking
7 forward to these various things you have in play and how
8 they're responding, can you give the Court an understanding or
9 a sense as to the periods of time after this work is -- if it
10 is completed and you get the sediments done and the other work
11 done, what's the expectation in a site like this in terms of
12 the years of monitoring that is likely to continue?

13 A. The expectation is in units of years, you know, how many
14 years is it going to take for this to achieve whatever it's
15 going to achieve after employing the technology. EPA
16 evaluates it based on a 30-year time frame. We're hopeful
17 that it won't be 30 years, but I have no way of knowing.

18 And then to throw into that mix is whether or not we'll
19 actually be allowed to submit and get approval for that
20 technical impracticability waiver.

21 Q. That's the issue of whether you're going to have to bring
22 the water quality to drinking water standards?

23 A. Whether or not we'll have to bring it to drinking water
24 standards. Our argument would be, of course, that on the
25 electric substation nobody would be using that for drinking

THOMAS EFFINGER - DIRECT EXAMINATION

1 water, and so as long as it stays on site, there would be no
2 receptor that might be exposed to that. And we'll continue to
3 monitor it to make sure it doesn't leave the site, and make
4 sure that through deed restrictions, no one is allowed to put
5 in a drinking water well.

6 Q. If you could bring up Exhibit 15, Denise, please.

7 THE COURT: Is there any way you can keep it from
8 leaving the site?

9 A. You could drive sheet piling, but then you have to deal
10 with all the subsurface structures, and you'd have to drive it
11 down, for intermediate groundwater, down to 50, 60 feet, which
12 that's a pretty involved process. You could install a grout
13 perc, and there's other technologies. They're pretty labor
14 intensive, and it would require you tearing up the perimeter
15 around -- at the edge of those roads, Charlotte Street,
16 Concord Street, and then even over at that parking garage. So
17 that's how you'd contain it. At least intermediate
18 groundwater.

19 BY MR. FELMLY:

20 Q. The next, and I think it's the last report I'm referencing
21 is Exhibit 15, the shallow groundwater monitoring results,
22 September event, and it's dated December 2008. And if you
23 could just describe for the benefit of the Court what this
24 particular report is, Mr. Effinger.

25 A. Again, we're continuing to follow the results of shallow

THOMAS EFFINGER - DIRECT EXAMINATION

1 groundwater to see what effectiveness we've had with all the
2 source removal activities. So we're following that, we're
3 looking for the shrinkage of the plume, whether or not they're
4 getting smaller, whether or not you see another hit for the
5 benzene or naphthalene that we're concerned about. Or any of
6 the metals that are at issue at the site. So that's for the
7 shallow groundwater. We're also doing that on a nine-month
8 interval, but it's done at a separate timetable than the
9 intermediate zone. So we're not doing both at the same time.
10 So the next one here would be done in June of '09.

11 Q. In addition to the photos that I showed before in
12 Exhibit 35, there are some additional photos.

13 MR. FELMLY: And, Denise, if you could bring up some
14 of the photos that would reflect some of the things you've
15 been talking about.

16 Q. Now, we saw this photo, which is obviously the photo of
17 the source material removal. Do you have another --

18 MR. FELMLY: Denise, if you could bring up 585,
19 please. And then try to see if you can take them one by one
20 and expand them so the Court can see what we've got here.

21 Q. This particular photo is identified as substation NAPL
22 removal. You've talked about the difficulties of working near
23 the substation, Mr. Effinger. What is happening here in terms
24 of this excavation for NAPL removal?

25 A. We're inside the substation fence and we're actually doing

THOMAS EFFINGER - DIRECT EXAMINATION

1 the digging. We would have our electrical folks out there to
2 make sure that we didn't have a contact issue with the
3 trackhoe versus these overhead lines. These overhead lines.

4 You can see that yellow piece of equipment kind of in
5 front of the trackhoe bucket, and that was our pumping
6 mechanism where we would actually pump the water out of the
7 hole as we're doing the excavation.

8 MR. FELMLY: Denise, can you zoom in on that the
9 little -- right there.

10 Q. Is that what you're talking about?

11 A. Yeah, it's kind of grainy when you blow it up, but yeah,
12 we had a pump on site to remove the water. And again, we were
13 following a grid pattern to remove this soil and then put
14 clean soil back in, and close it up before we started the next
15 area. So you can see it's doing that here.

16 The orange fencing to the right wraps around that
17 electrical feeder bay that we could not dig underneath. And
18 we observed that along that perimeter that there was some tar
19 that would then come out of the sidewall, and so we installed
20 our perimeter trench back there to capture whatever else might
21 move back, you know, into a deeper pocket that we created. A
22 collection trench so we could pump it out. And we are
23 recovering some tar from there. But that's one of the areas
24 we couldn't excavate, and of course we did as much as we could
25 inside the substation, but then just to the left of that off

THOMAS EFFINGER - DIRECT EXAMINATION

1 the picture is the rest of the big electrical equipment at the
2 site.

3 MR. FELMLY: If could you go to the lower picture
4 now, Denise, and see what that shows.

5 Q. Maybe this will -- What does that show us; maybe the same
6 thing, Mr. Effinger?

7 A. It's a little bit further east, you can see Concord Street
8 kind of behind the arm of the trackhoe, and then to the left
9 of that are the frac tanks, which is where we would pump the
10 water to, manage that water, let it settle, go to another frac
11 tank, and then go through the filtration system before we
12 released it to the sanitary sewer.

13 In the foreground you can see the tops of the trees that
14 were used for phytoremediation, and again, this is an electric
15 feeder bay that we couldn't dig underneath.

16 Q. So that electrical superstructure there, that's the
17 electrical feeder bay you're talking about.

18 A. Yes, sir.

19 Q. And you can't get underneath that.

20 A. Yes, sir, and if it's ever removed, then we'd have to
21 remove the tar that's underneath it.

22 MR. FELMLY: And the next picture, Denise, please?

23 Q. Is this the tar pumping or purging process that you
24 described has extracted 20,000 or so gallons of tar?

25 A. No, actually this is the in situ chemical oxidation work

THOMAS EFFINGER - DIRECT EXAMINATION

1 that has taken place over at the Luden's property. So this is
2 on someone else's property. You can see we barricaded their
3 parking lot to work in the parking area in front of the Imax
4 theater. And as you treat with the chemical oxidant I told
5 you about, you can't push it in too fast. Well, if you -- as
6 you push in this liquid, you're displacing some groundwater,
7 and we're actually capturing this groundwater in these
8 55-gallon drums to manage it. So we're putting in the oxidant
9 and we're displacing some of the intermediate zone
10 groundwater.

11 MR. FELMLY: The next picture, Denise.

12 Q. What does this picture depict, sir?

13 A. All right. We're standing on the observation deck over at
14 the tour boat facility, looking towards the Aquarium, so
15 that's the substructure to the Aquarium in the background.
16 And here we have our contractors, in this case it was Cape
17 Romain, actually installing a cap to keep the -- keep the sand
18 blanket in place, and they're doing this with armor lock,
19 which is a material, it's block, and it's joined by a nylon
20 cable. But as you put that down, in these 12-by-15 mats,
21 it -- with the geotextile underneath it, it holds that
22 sediment down so it can't be disturbed later by forces of
23 nature, if there's a storm surge or hurricane or what have
24 you, that sand cap is going to stay in place.

25 Now, these blocks are going to fill in with sediment and

THOMAS EFFINGER - DIRECT EXAMINATION

1 eventually become more natural looking. But the agencies
2 actually desired this over using rip rap or stone to armor it.

3 Q. And the next picture, I think we have several other
4 pictures of the sediment capping. This is obviously from
5 looking -- is this up in the Aquarium looking down?

6 A. Yes, it is, what you're looking at here is some oyster
7 bags, so there was another augmentation for us to add to an
8 existing oyster habitat zone. It has two functions. It
9 creates additional habitat for oysters to move in, but it also
10 helped us with capping the area and keeping the sediments
11 down.

12 Q. And the next picture, if there is one? And is this both
13 oyster and the armor lock?

14 A. Yes, it is. And I think you can see it pretty good there
15 in the picture.

16 Q. And the point of this is to keep the sand over where the
17 tar deposits are, and have this heavy weight of material on it
18 that will hold even in the form of a storm or in the stress of
19 a storm?

20 A. That's right, it will hold the sand cap down on top of
21 contaminated sediment so they would not be resuspended.

22 Q. And before -- the last thing before I move to the costs
23 that have been incurred, and you've talked about some of this
24 and we won't spend much time, but just to recap on the things
25 that are currently underway, more sediment work will be done

THOMAS EFFINGER - DIRECT EXAMINATION

1 out near where the City wants to do its piers. Is that right?

2 A. Excuse me, yes. We have that area remaining to be capped.

3 So when they're able to move forward with their piers

4 construction, then we'll be able to come in at the same time

5 they're driving pilings, to complete that capping work.

6 Q. Will that be somewhat similar to what we're seeing the

7 capping work here?

8 A. We'll be able to use rip rap there, because they're not as

9 concerned about how it looks underneath that structure. But

10 it will still have that black fabric that you could kind of

11 see there, that will be put in place, it will have sand

12 underneath, the geotextile, and then the stone on top of it to

13 prevent that sand from being moved.

14 Q. You still have an issue inside the substation with tar

15 under the components that can't be disturbed, and is there a

16 plan for what to do about that?

17 A. That's still being kicked around, but as long as we're

18 still pumping tar with that removal mechanism, and we have

19 that one pump sitting in the gas holder, as long as we

20 continue to pump tar, we are making progress towards that

21 removal, and we've kind of shelved that, you know, whatever

22 the final remedy might be for that, for now.

23 Q. You're still studying that groundwater moving towards

24 those MCLs?

25 A. That's correct.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. And the issue of whether you're ever going to get a
2 technical impracticability is still out there?

3 A. Yes, it is.

4 Q. What about the issue -- well, let me ask it this way. Is
5 there an issue about contamination in your neighboring
6 property where the ship container facility is slightly
7 upstream on the Cooper River?

8 A. Yes, part of our intermediate groundwater work also
9 expanded over into the Ports Authority property, so that would
10 be just north of our site and across Charlotte Street. So the
11 Ports Authority was gracious to work with. They gave us
12 access to their property to do some of the in situ chemical
13 oxidation in the intermediate zone that was tacked in the ROD
14 for OU-2. We did as much as we could over there within
15 practical limits of them being able to operate that shipping
16 container port.

17 When we installed those wells we did observe some remnant
18 issues in the soil that came out. And the agencies have told
19 us that once the Ports Authority moves, if and when they move
20 off that property, we'll have to do more work on that
21 property. I believe was the State --

22 THE COURT: Do they have any plans to move it?

23 A. Well, I think the mayor would --

24 THE COURT: I've seen layouts in the paper on what he
25 plans to do to it, but I haven't seen anything where they were

THOMAS EFFINGER - DIRECT EXAMINATION

1 planning on moving.

2 A. I used to talk with Steve Connor over at the Ports
3 Authority quite a bit, and he would never tell me, you know,
4 if and when they would be planning on moving off of that
5 property. But I know it's a strong desire by Mayor Riley.

6 THE COURT: Let's take about 15 minutes.

7 MR. FELMLY: Okay.

8 (A recess was held at this time.)

9 BY MR. FELMLY:

10 Q. I want to turn now to the expenditures and response costs
11 that you're claiming on behalf of SCE&G, and in that regard --

12 THE COURT: I know you say the costs are not
13 warranted under CERCLA, and some are not recoverable, but is
14 there any dispute about whether this money was spent for the
15 purposes he says it was spent for? When you take a lot of
16 depositions.

17 MR. BARGREN: We --

18 MR. FELMLY: I think the answer is we have provided
19 tremendous amount of -- I'm going to answer it very
20 specifically with the exhibit. There are monies that we
21 cannot find invoices on, that are in records of my client that
22 continue to be looked for, and that amount of the whole in
23 this case, 48 million, is something in the vicinity of
24 \$800,000. I don't know that they're disputing that we didn't
25 pay them. We haven't provided the documentation --

THOMAS EFFINGER - DIRECT EXAMINATION

1 THE COURT: Let me see.

2 MR. BARGREN: We don't dispute the payments or the
3 descriptions; we certainly dispute that some items are
4 eligible for recovery under CERCLA.

5 THE COURT: So --

6 MR. BARGREN: We have some questions about some
7 specific items, especially as it relates to the \$26 million
8 payment.

9 THE COURT: You don't have any question that they
10 spent the money for the purposes that they say they spent it
11 for, but you have questions about whether the money that they
12 spent constitutes, in toto, recoverable damages?

13 MR. BARGREN: That's correct.

14 THE COURT: Well, do you have a sheet showing it?
15 Let's put it in, see if they agree to it and we'll be on our
16 way.

17 MR. FELMLY: We'll be doing that.

18 THE COURT: Unless it needs some type explanation.

19 MR. FELMLY: Well, the first thing I was going to do
20 is put on the information on the payments to the City and then
21 move on to the other costs.

22 THE COURT: Let's see if they have any objection to
23 it. Apparently they don't have any objection to the fact you
24 paid that money to the City; they object to whether or not it
25 went for the purposes that make it recoverable under --

THOMAS EFFINGER - DIRECT EXAMINATION

1 MR. BARGREN: That's correct, Your Honor.

2 MR. FELMLY: All right. Well, in that regard, the --

3 THE COURT: Seems to me the payment to the City would
4 be the -- one of the most controversial pieces of evidence.

5 MR. FELMLY: I think that's right.

6 THE COURT: And would require some serious
7 explanation for reasons that, you know, I've stated earlier.
8 They may not be real reasons, but at least there's -- it will
9 be something I would look for. But then the actual money they
10 spent for people like Cape Romain, I think you mentioned that,
11 people like that, I mean that should be no question about
12 those amounts. So let's get those out of the way, then we'll
13 go to the ones that are controversial.

14 MR. FELMLY: Let me do that. If I could switch to
15 the ELMO, please. What I'm showing the Court now is
16 Plaintiff's Exhibit 234, which is something that has been gone
17 over with opposing counsel. And --

18 THE COURT: Is it in over objection or without
19 objection or what?

20 MR. FELMLY: My objection is it will come in without
21 objection on the basis of what Mr. Bargren just said.

22 MR. BARGREN: Which number are you on? I have 243.

23 MR. FELMLY: 243. I'm sorry, if I said 244. Is that
24 coming up?

25 If I may, Your Honor, let me just ask Mr. Effinger what

THOMAS EFFINGER - DIRECT EXAMINATION

1 this is, and then I'll offer it. And Mr. Bargren, I
2 understand, doesn't have an objection.

3 BY MR. FELMLY:

4 Q. What is this document that we've marked as 243 for I.D.,
5 sir?

6 A. This document captures the response costs for different
7 time periods and shows the money spent to date. We've got the
8 time period in one of the columns, then the documented costs
9 which shows the invoices that we've been able to provide to
10 opposing counsel. There's somewhere -- that data recovery is
11 still ongoing, and that shows \$883,000 for a total cost out in
12 the right-hand column, and as you add up the cleanup
13 activities, we're at 23 million, and then that 26 million for
14 the City of Charleston, which gets us to the 49 million at the
15 bottom.

16 Q. So with respect to this, let me just ask you about the 883
17 item. Data recovery incomplete. To what extent are you
18 confident that those monies have been properly spent on the
19 remediation?

20 A. I'm very confident that the monies were spent on
21 remediation. Not only because of all the work that was
22 involved, but also because starting in about 1994 and
23 thereafter, we've been subject to an annual audit by our
24 utility commission to look at these costs and expenditures and
25 make sure that they were prudently incurred.

THOMAS EFFINGER - DIRECT EXAMINATION

1 Q. So when you take those other items which you do have the
2 backup, and we've provided it all to the other side, the total
3 for the recovery before we get to the issue of the payment to
4 the City, is 23,201,917, is that right?

5 A. Yes, sir.

6 MR. FELMLY: And then we'll be entering these
7 agreements in a minute.

8 Q. Payments were made to the City of Charleston pursuant to
9 the environmental agreement in the amount of \$26 million,
10 which is also reflected here.

11 A. That's correct. And that was over a four-year period, as
12 shown in the '96 to '99 time period shown.

13 Q. And for incurred costs, is this the claim for the amount
14 of response costs that SCE&G is seeking?

15 A. That would document the amount of response costs to date,
16 and recognizing that there is going to be continuing
17 obligation and expenses to take this site to completion.

18 Q. And on that subject, just in terms of projected costs that
19 haven't been incurred on the second page of this, does it
20 reflect the estimate that we've also provided to the other
21 side of what is projected for those costs, but has not yet
22 been incurred?

23 A. We're projecting out until the year 2025, which includes
24 the monitoring and all the other activities that need to take
25 place, which we touched on to reflect \$13 million and change

THOMAS EFFINGER - DIRECT EXAMINATION

1 to -- as our best estimate on what it's going to take to
2 finish this site.

3 Q. And we're also seeking declaratory judgment in this
4 matter. And as costs are incurred, we would ask that the
5 declaratory judgment provide for that reimbursement?

6 A. Yes, we would.

7 MR. FELMLY: As to Plaintiff's Exhibit 243 for I.D.,
8 I'd ask that the I.D. be stricken on that summary.

9 THE COURT: Any objection?

10 MR. BARGREN: Yes, we do object to the extent that
11 first of all they're offering \$800,000 of undocumented
12 numbers. Secondly, I have questions about the 26 million, as
13 I just mentioned. And thirdly, the \$13 million future costs,
14 I also have some questions. If we want to agree these are the
15 numbers to start with, that's fine, but I certainly want to be
16 able to ask Mr. Effinger some questions about these numbers.

17 THE COURT: Certainly. As far as the future costs
18 are concerned, I sustain the objection as to those. No
19 foundation has been laid for them. He just says that's what
20 it's going to be. We don't know how he computes them, we
21 don't know whether he's qualified to compute them. He has a
22 chemistry degree, a chemistry Ph.D.; whether that qualifies
23 him to come up with these figures, I don't know.

24 As far as the City of Charleston is concerned, in light of
25 the fact that they're not someone that you would normally

THOMAS EFFINGER - DIRECT EXAMINATION

1 think would be involved in the remediation business, I don't
2 think that I can assume that payments made to them are
3 recoverable under the Act. And so absent further foundation
4 evidence concerning that payment, his objection is sustained
5 as to that. Now --

6 MR. BARGREN: The other component, Your Honor, that
7 I'm objecting to is the \$883,000.

8 THE COURT: See, I don't see it here. I don't know
9 what you're talking about. I haven't committed it to memory.
10 The 800 what now?

11 MR. BARGREN: In the first line of numbers, \$883,516.

12 THE COURT: You object to that on what ground?

13 MR. BARGREN: They don't have backup for that.

14 MR. FELMLY: Well, on that one, Your Honor, those are
15 the items where --

16 THE COURT: Well, he's objecting to it. I think that
17 you're going to have to offer additional evidence as to those
18 costs. It may be that this witness has knowledge of it. It
19 may be that somehow there's a business record or it comes in
20 that way, I don't know. But absent additional information,
21 that -- I have to sustain it. But what we were trying to do
22 was get the items out of the way that he objected to, and then
23 we could deal with the ones -- get them out of the way that he
24 doesn't object to, then we could deal with the objections.
25 Seems to me he objects to the 800,000, he objects to the

THOMAS EFFINGER - DIRECT EXAMINATION

1 City's payment, and he objects to future costs.

2 MR. BARGREN: That's correct, Your Honor.

3 THE COURT: At this point, in the condition the
4 record is in at this time, I sustain his objection to those
5 three items of damages.

6 MR. FELMLY: Okay. As to the other items, the
7 documented costs of 2295, and the \$20 million cost in the
8 second line, and those other ones, I understand they are in
9 evidence, is that correct?

10 THE COURT: They stipulate that those costs were
11 incurred by the plaintiff in attempting to clean up this site.
12 Now, they don't agree that they're recoverable, because they
13 take a -- they have limited defenses, but they say you don't
14 have to pull out the invoices and get people to say that that
15 money was actually spent. They've looked at the discovery,
16 they've looked at the documents, and they agree that that has
17 been spent by South Carolina Electric and Gas in good faith to
18 clean this site up.

19 MR. FELMLY: I'd like to pursue then further
20 questioning on that item, now that we've got the disputed
21 items identified.

22 BY MR. FELMLY:

23 Q. Let me focus on the 883,516. As to those monies, can you
24 describe for the Court the way in which this record keeping
25 was kept in those early years? What I would like to do is

THOMAS EFFINGER - DIRECT EXAMINATION

1 have you explain to the Court how the numbers that are in your
2 records that identify the costs that would include those
3 monies were spent --

4 THE COURT: Do you know that of your own personal
5 knowledge?

6 A. Yes, sir, I do.

7 THE COURT: Okay.

8 BY MR. FELMLY:

9 Q. And explain to the Court the reason why there is
10 difficulty these years later, from 1993 or '4, in obtaining
11 the actual invoices. What's the accounting problem or system
12 that's involved in pulling up those invoices to satisfy
13 opposing counsel's request?

14 A. Okay. There's a couple of questions there. Let me start
15 with how I know that the \$883,000 is a good number in good
16 faith.

17 We -- I mentioned previously how we're audited by the
18 Utility Commission, and a lot of those costs were rolled up
19 when that process was started. They came in, they audited
20 those numbers, they verified that the money was spent.

21 THE COURT: What do you mean by rolled up?

22 A. From 19 -- from '89 to '90 on up to 1994 when they first
23 started that, so those years were combined, and then they were
24 given copies of invoices and receipts and they were allowed to
25 do an independent audit of those records and verify that they

THOMAS EFFINGER - DIRECT EXAMINATION

1 were accurate, they were prudent and they were wisely spent.

2 So the \$883,000 that we have now, we have it on summary
3 sheets from those clerks, but the accounting systems at that
4 time, there was no software that was in place to track those
5 records. That started a little bit later, and we've gone
6 through three or four different software accounting systems.

7 THE COURT: What period of time does \$883,000 cover?

8 A. Primarily it's in that 1990 to '97, but we think the
9 majority of that is in the '95 and earlier time period. And
10 we still have folks that are looking to retrieve those
11 invoices from cold storage.

12 BY MR. FELMLY:

13 Q. And with regard to that cold storage and the way these are
14 stored, can you describe for the benefit of the Court what
15 that system is and whether it's searchable in terms of the way
16 your accounting records would be searchable today?

17 A. Yes, sir. What my understanding is, during the years that
18 those invoices were occurring, they actually put them in boxes
19 by year. So they weren't sorted by any kind of contractor,
20 project or anything like that. And they weren't even scanned
21 or microfiched until later on.

22 So those records are just stacked in boxes by year that
23 somebody is going to have to manually go through, pull out the
24 invoices related to these contractors, and then I'll have to
25 look at it and validate that it was for this project, to get

THOMAS EFFINGER - DIRECT EXAMINATION

1 those records.

2 THE COURT: For \$883,000, looks like somebody would
3 be willing to go through it.

4 A. I'm definitely willing to do it.

5 THE COURT: I have a couple law clerks.

6 A. Yes, sir, and I am definitely willing to do it. But
7 they've got to get those records back, they're supposed to be
8 back in the office early this week, and I believe we have a
9 law clerk that may be working on it as of today.

10 THE COURT: What is your knowledge about the 883,000;
11 what was that spent on?

12 A. Some of that was spent on the early soil work that I
13 talked about, so many soil boring work. We went through
14 couple of different contractors, starting with Keystone and
15 then Chester. And so the early on work, they were starting to
16 write the work plans that were given to EPA, and I think we
17 talked about the initial administrative order on consent that
18 was issued in 1993, to tell us you need to go out and do this
19 remedial investigation feasibility study. Obviously there was
20 work leading up to that 1993 order, and that work was
21 conducted by these contractors to get us there, to get the
22 preliminary information so that EPA as well as us, you know
23 what was -- what were the problems.

24 THE COURT: How do you come up with the \$883,000
25 figure?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. That number actually came from the number that was used in
2 the gas rate case back in 1994. They showed the summary of
3 the expenditures on --

4 THE COURT: They did what with the summary?

5 A. Yes, sir?

6 THE COURT: They did what with the summary?

7 A. They showed the summary of expenses to date in a document
8 that was given to the auditors from the Public Service
9 Commission.

10 THE COURT: When you say they chose, who do you mean
11 by they?

12 A. Our rates folks. So they took information from accounting
13 that was relevant at the time from that time period, and of
14 course they kept, you know, they were able to get those
15 records more readily at that time than what we are now, 14, 15
16 years later. So they had the numbers which showed how much
17 had been spent to date at that site. I took that numbers and
18 I put that on my summary sheet and kind of tracked it through
19 the years, as money was spent. And so by each year we kind of
20 had a record of what money was spent and when it was spent.
21 And we later created another document in good faith estimating
22 by each phase, how much money was spent for each year. And we
23 got -- we made a good faith effort to show that as accurately
24 as we possibly could. So --

25 THE COURT: Do you have any more questions you want

THOMAS EFFINGER - DIRECT EXAMINATION

1 to ask him?

2 MR. FELMLY: I do.

3 BY MR. FELMLY:

4 Q. Is the document that is marked Exhibit 1, and it's a very
5 big document, but if you can try to give the Court a sense of
6 what we've got, Exhibit 1 is a spread sheet that is entitled
7 estimated expenditures by major activity, and it describes
8 various years.

9 Can you describe for the Court what this worksheet or what
10 this summary is, and how it relates to the work that you've
11 just been describing to the Court's questions?

12 A. Yes, sir. Again, this is our best estimate of when the
13 work took place and how much money was spent. And we had to
14 go back and recreate it using that summary number to show each
15 phase.

16 But you can see in that far left-hand column, the task
17 description, so what the work activity was, and if you scroll
18 across, that first one is 1990 to 1992, and the primary
19 contractor then was Keystone that did the work, and up until
20 '94 when they became Chester. Then Chester evolved into GTI,
21 or Groundwater Technologies, and they evolved into Fluor
22 Daniel GTI. So for each year, for each task description you
23 can see the money that was spent and for what work it was
24 approximately done on.

25 Q. And in terms of that, you've calculated that down and

THOMAS EFFINGER - DIRECT EXAMINATION

1 brought it down to the totals that reflect the total for the
2 entire period, is that correct, down in this area here?

3 A. Yes, sir.

4 Q. And is this part of the backup and information, the
5 summary sheets that you were talking about that you kept year
6 by year and updated?

7 A. This is not it specifically. But there was another spread
8 sheet that I used to keep track of where we are with our
9 expenses on the site. So that we can disclose remaining
10 liability to the Securities and Exchange Commission.

11 THE COURT: Now, show me where the \$883,000 is on
12 this spread sheet.

13 A. Okay. You have to go up to the top. What we did was we
14 took -- if you add up at the bottom, go ahead on down to the
15 bottom, a little bit -- actually you're going too far to the
16 right. But if you add up that bottom column through 1990
17 through 1997, up until 1998, if you add up those numbers down
18 there and subtract out the invoices that we found and take the
19 difference, that's how we derived the 883,000.

20 Q. So are you saying if we take these items that are in this
21 column up to '97?

22 A. Actually go down a little bit with your finger, take those
23 numbers and add them up.

24 Q. The total by year across the bottom?

25 A. Right. Up through 1997, then you add that number out, you

THOMAS EFFINGER - DIRECT EXAMINATION

1 subtract out the dollar amount for the invoices that we have
2 produced, and you'll come up with the 883,000.

3 Q. And is that math that you were involved in doing?

4 A. Actually I'm aware of it being done by one of the
5 paralegals.

6 Q. Okay. And in terms again of the issue of whether or not
7 you're confident what that 800 some odd thousand dollars was
8 performed and paid, even though it is buried in the microfiche
9 apparently now in terms of the invoices, what's your level of
10 confidence in that, based on personal knowledge?

11 A. I'm 100 percent confident that we spent at least that
12 money, if not more. But that matches up with the money that
13 we have kept track of that has been spent for this site.

14 MR. FELMLY: So as to that, Your Honor, I would ask
15 that the spread sheet that is part of this explanation be
16 marked as an exhibit and the I.D. be stricken on that, and
17 that the additional number that's on the sheet for the
18 883,000, which I think an adequate foundation has been laid,
19 be accepted in as part of the claim in the amount in this
20 case.

21 MR. BARGREN: Continue to object on the same basis,
22 as well as to now Plaintiff's Exhibit 1 --

23 THE COURT: What I asked the witness, and I asked the
24 witness where he came up with \$883,516. And he said that an
25 accountant took that off of their records and put it onto a

THOMAS EFFINGER - DIRECT EXAMINATION

1 summary that they used in pleading a rate case before the
2 South Carolina Public Service Authority. I don't know who
3 that accountant was, I don't know where he got the records. I
4 don't know if they could possibly be considered business
5 records or anything else. But there's a gap in there to where
6 he relies on what the accountant told him, and that is not
7 sufficient, in my judgment, for it to come in.

8 Now, I've already told you that in a nonjury case I'm
9 probably going to hear everything. And then the Fourth
10 Circuit in this area, and probably in this area alone, gives
11 us a little bit of leeway and gives us credit for knowing some
12 evidence and relying only on relevant evidence and admissible
13 evidence. I'm telling you now, even though I'm going to hear
14 it, I think I ought to tell you in fairness, based on what
15 you've done so far, I don't think it's met the test of
16 admissibility.

17 MR. FELMLY: Okay.

18 THE COURT: I think it's hearsay. Maybe not. May
19 get around the hearsay, but this witness has said it's his
20 sole basis for knowing that that \$883 was there, was what the
21 accountant put on the summary before the Public Service
22 Commission. And the accountant's not here, and it's offered
23 for the truth of the matter.

24 MR. FELMLY: Two things, Your Honor. One, I do think
25 it's based on business records as part of that rate case.

THOMAS EFFINGER - DIRECT EXAMINATION

1 THE COURT: May very well be, but you haven't shown
2 that.

3 MR. FELMLY: The additional piece of it, and frankly,
4 I am quite surprised because I thought I had resolved this,
5 and obviously I haven't. The additional piece of it, and the
6 only aspect of this is we will go back and find out who that
7 accountant was, and I --

8 THE COURT: The invoice is a business record, in all
9 probability. And through the custodian or some other
10 appropriate person, it can be admitted in evidence. The
11 spread sheet that was offered before the Public Service
12 Commission arguably is not a business record of South Carolina
13 Electric and Gas, it's a business record of the accounting
14 firm. They prepared it, the person that had knowledge of it
15 was in their employ and not in South Carolina Electric and
16 Gas. So I think there's a gap in there that makes it
17 questionable.

18 Now, I'm going to take it in. If I change my mind, that's
19 one thing, but I just don't see now to where you've met the
20 burden on that particular piece of evidence.

21 MR. FELMLY: All I'm asking, and this is relevant to
22 what I do now, is I'm going to go back, re-examine this, and
23 may ask the Court for the opportunity to bring additional
24 evidence in.

25 THE COURT: I don't -- wouldn't have any hesitation

THOMAS EFFINGER - DIRECT EXAMINATION

1 at all under the circumstances that he's explained, but I
2 don't know what the volume of these records are. I assume
3 they're pretty hefty. But still, this case has been going on
4 for awhile, and \$883,000 may be pocket change to South
5 Carolina Electric and Gas, but most people would think that's
6 a substantial sum of money, enough to go looking for anyway.

7 MR. FELMLY: Let me just say on that, and I'll be
8 very brief on it. This chart or an earlier version of this
9 was produced at Mr. Effinger's deposition, which was many many
10 many many months ago. Only in the last month or so did I
11 receive a request for the backup. And I will tell you we have
12 turned ourselves inside out on that and produced, as you can
13 see, 20 some odd thousand dollars of backup. As we speak,
14 there are people still working on that.

15 THE COURT: The fact that those are the true facts
16 gives you more time. But it doesn't make it admissible.

17 MR. FELMLY: All I'm saying is I may want the
18 opportunity to try to see if I can resolve it.

19 THE COURT: What we're trying to do is get to the
20 bottom of this and get to the truth, and if you have some
21 other evidence that will do that, provided the defendant has
22 an opportunity to respond to it in a fair way, we'll give it
23 consideration that it deserves.

24 MR. BARGREN: Your Honor, if I could just say, the
25 issue of documentation came up at that deposition a year ago.

THOMAS EFFINGER - DIRECT EXAMINATION

1 THE COURT: I don't care about all that. I'm not
2 getting into that.

3 MR. FELMLY: The next step is to put in the
4 information to lay the foundation with respect to the
5 \$26 million payment.

6 THE COURT: That's the City?

7 MR. FELMLY: That's the City.

8 THE COURT: Are there any records of that? I thought
9 about that because we talked about it earlier, and of course
10 the first thought that came to my mind was the best evidence
11 rule. Is there a document that sets forth the terms under
12 which that \$26 million was paid?

13 MR. FELMLY: Yes, there is.

14 THE COURT: Okay.

15 MR. FELMLY: And that's Exhibit No. 11, the
16 environmental agreement between the City of Charleston and
17 SCE&G.

18 And, Denise, if you could --

19 BY MR. FELMLY:

20 Q. Mr. Effinger, what is this document that we're displaying
21 as Exhibit 11?

22 A. This is the environmental agreement between us and the
23 City of Charleston to resolve monies that they spent
24 investigating and doing work at the Aquarium property.

25 Q. And in terms of the arrangement between the City and the

THOMAS EFFINGER - DIRECT EXAMINATION

1 company, what is the relationship of this agreement to that
2 \$26 million?

3 A. This sets forth the area and the terms and conditions of
4 that \$26 million, it talks about equal payments over four
5 years, so that was six and a half million dollars a year over
6 those four years. It defines the area, and I believe it gives
7 us an indemnity on work on their property.

8 MR. FELMLY: Denise, can you bring up page 58013.
9 And if could you enlarge the top paragraph, please.

10 Q. Looking at this paragraph which is on page five of the
11 environmental agreement, is this the place where the City's
12 remedial work and the City's payment of \$26 million is
13 reflected the environmental payment?

14 A. Yes, it is.

15 Q. The question has come up with regard to whether any
16 portion of the \$26 million was for payment for other issues
17 such as the bus service in the City or the franchise between
18 the company and the City of Charleston. Do you have knowledge
19 as to whether or not those items were in any way involved with
20 this?

21 A. No, there were separate agreements for each of those other
22 issues. The timing was in the same time frame, but this
23 exclusively deals with work that they did, and continuing work
24 that they might have to do on this property.

25 Q. And, Mr. Effinger, did you provide testimony to the Public

THOMAS EFFINGER - DIRECT EXAMINATION

1 Service Commission in South Carolina with respect to the issue
2 of the \$26 million payments made pursuant to the environmental
3 agreement?

4 A. Yes, sir, I did discuss that in front of the Utility
5 Commission regarding my knowledge as to what the money was
6 spent for and why it was prudently incurred.

7 Q. So you were the company's representative that was
8 describing to that agency the details of these payments and
9 had knowledge of it?

10 A. Yes, sir.

11 Q. And in Exhibit 33, Denise, if could you bring that up. Is
12 this -- if we can highlight the top, is this your summary
13 testimony in connection with that docket before the Public
14 Service Commission?

15 A. Yes, it is.

16 Q. And if we -- it goes on for some number of pages, but do
17 you describe in your testimony the breakdown of how the monies
18 were actually spent, as you understood it?

19 A. Yes, I can. I talked about some of the studies that the
20 City had to conduct, especially in sediments. There was
21 reports prepared by PSI, which was a name of a company, also
22 Killam, and those are referenced in the Record of Decision,
23 and then later used in OU-2. But they did some work with the
24 sediments.

25 They also had to design a plan that would ensure that

THOMAS EFFINGER - DIRECT EXAMINATION

1 there was no further release from their site. They had to
2 install sheet piling in the river, they had to put down sand
3 blanket, they had to install timber lagging wall. So there
4 was a lot of work that they had to do on their property so
5 that contamination would not be released, and there would --
6 there would not be a continuing problems from the manufactured
7 gas plant on their property as they constructed those
8 facilities.

9 There was also work that the City did along Calhoun
10 Street. The brick archway I talked about earlier that had
11 leaks in it and was acting like a French drain and taking the
12 groundwater that flowed towards it and discharging it to the
13 river, they had to install the sheet piling to block that flow
14 going onto the Ansonborough Field, south of our property.

15 They had to backfill the brick archway drain as it
16 discharged to the Cooper River. So there was a lot of
17 mitigation work they had to do there.

18 In providing this testimony, what I looked at were their
19 records. They provided us with their records and their
20 invoices and the sheets describing the work that was done, the
21 money that was spent with the contractors, the soil that was
22 shipped offsite. All the work that they had to do in managing
23 environmental contamination on their property.

24 I believe they showed something in excess of \$43 million,
25 or they said they had spent in excess of \$43 million.

THOMAS EFFINGER - DIRECT EXAMINATION

1 I went through those records and assured myself that I
2 felt comfortable that if you sort out the stuff that was maybe
3 questionable, it was something in excess of \$30 million. And
4 so settling for \$26 million to resolve the issues was
5 determined to be prudent.

6 MR. FELMLY: Let me ask you, Denise, to bring up page
7 55272, which is part of this Exhibit 33. And if you could
8 enlarge that.

9 Q. This schedule that we're looking at here which is part of
10 your written testimony to the PUC, is what, sir?

11 A. These are all the different items that I pulled out of
12 their submittal. The original was \$43 million or thereabouts.
13 I pulled this information out of it that I felt, all right,
14 well, this at least I feel comfortable is justifiable
15 environmental cleanup expenses, and work that they did not
16 only to allow them to build on this property, but a lot of it
17 potentially helps us later on in dealing with sediments and
18 those issues, where they had to put down a sand cap and that
19 kind of work.

20 So this adds that up. You can see that there was some
21 monies that were backed out of it, to come up with the
22 \$30 million number at the bottom.

23 Q. Do we also have, Mr. Effinger, the actual agreements in
24 evidence marked as exhibits that are related to the bus
25 service issue and the franchise issue with the City?

THOMAS EFFINGER - DIRECT EXAMINATION

1 A. Do we have those agreements? Yes, we do.

2 Q. Okay.

3 MR. FELMLY: Let me ask, Denise, if you'd bring up
4 Exhibit 12, please.

5 THE COURT: When did the bus transaction take place?
6 I remember reading about it in the paper, but I don't remember
7 when it took place.

8 MR. BARGREN: It was within a couple weeks.

9 A. About the same time frame.

10 THE COURT: And under that, SCE&G paid the City?

11 A. We gave them something on the order of I think nine or
12 \$10 million.

13 THE COURT: You gave them a headache plus something
14 else.

15 A. Well, yes, sir. But that was in the agreement to give
16 them money along with the property and the buses and that
17 facility. And they took over the bus system.

18 BY MR. FELMLY:

19 Q. At any rate, the development agreement between the City of
20 Charleston and SCE&G has been marked as Exhibit 12. This
21 document relates to what, Mr. Effinger? What is this
22 transaction between the City and your company?

23 A. I would need to read through more of this. One of them is
24 going to deal with the bus system, and the other one that
25 deals with the franchise agreement, I don't recall what it was

THOMAS EFFINGER - DIRECT EXAMINATION

1 titled. So I would want to make sure that --

2 Q. But this does not deal with the -- this particular
3 agreement does not deal with the environmental piece of this?

4 A. No, sir, it does not.

5 MR. FELMLY: If we can bring up the first page of
6 this, Denise, we'll identify what we're talking about here.

7 THE COURT: If he wasn't involved in it and he
8 doesn't have any personal relationship to the transaction, it
9 seems to me he shouldn't be trying to explain it. If you want
10 to publish it, you can.

11 MR. FELMLY: The only reason I wanted to publish it
12 is to clearly identify to you that it is not the environmental
13 agreement.

14 THE COURT: Obviously I'm going to have to read it.
15 But -- in the other agreements, in the other documents that
16 he's explained, normally you would say they speak for
17 themselves and no explanation is necessary. But there were
18 terms used in there that I didn't know. And to the extent
19 he's an expert, I think it's helpful for him to explain those
20 terms and to place those documents in a particular time
21 context. But with these, apparently he had nothing to do with
22 these.

23 You had nothing --

24 A. No, sir, I didn't have anything to do with the buses or
25 the franchise, that's correct.

THOMAS EFFINGER - DIRECT EXAMINATION

1 MR. FELMLY: Well, I would then just offer this
2 document --

3 THE COURT: Any objection to them?

4 MR. BARGREN: Plaintiff's Exhibit 12, no. No
5 objection.

6 THE COURT: Without objection.

7 (Plaintiff's Exhibit 12 received.)

8 THE COURT: And at some appropriate time in your
9 closing argument you can explain to me what's in there, and I
10 can also read it and ultimately make a decision on what it
11 says, based on my knowledge of what's in there.

12 MR. BARGREN: I guess before I say no objection, I
13 should clarify which exhibits you're offering here, Bruce.

14 MR. FELMLY: I'm going to do it with a bunch of them
15 here, because I think they'll fall in the same category. The
16 one I just presented and I understand you don't have an
17 objection, is Exhibit 12, the draft development agreement
18 between City of Charleston and SCE&G.

19 I would also move the admission of the payment and
20 transfer agreement between the City of Charleston and SCE&G,
21 which is Exhibit 14. It's August 22, 1996. And also, as the
22 Court pointed out, you'll be able to review this. This is the
23 matter that relates to the franchise in the City. So I would
24 move the admission of that.

25 MR. BARGREN: No objection.

THOMAS EFFINGER - DIRECT EXAMINATION

1 (Plaintiff's Exhibit No. 14 received.)

2 MR. FELMLY: I would also move the admission of
3 Exhibit 13, which is the 1996 amended ordinance, and the
4 amended ordinance deals additionally with the franchise
5 agreement that I just marked. And I'd offer that.

6 THE COURT: You know, it hadn't occurred to me till
7 right now, but I live in downtown Charleston, and of course I
8 buy my power from South Carolina Electric and Gas, and I pay
9 my taxes to the City of Charleston. It hadn't occurred to me
10 that that's any basis for disqualification, and I don't know
11 that it is, but I do think you ought to know that I'm sitting
12 here thinking, you know, who's paying for this? But really it
13 has no bearing on any decision that I make, but it did occur
14 to me that I pay taxes and I pay a bill to this witness'
15 company every month. And if that is some basis for
16 disqualification, I hope you'll raise it and we'll look at it.
17 But it just hadn't really occurred to me until we got into
18 this case.

19 MR. FELMLY: Well --

20 THE COURT: I dare say everybody in this courthouse
21 has got the same situation.

22 MR. FELMLY: It's certainly not something that I
23 think we would complain about, but also don't expect that it
24 would be --

25 THE COURT: I went to a seminar last week in

THOMAS EFFINGER - DIRECT EXAMINATION

1 Baltimore, we have one every year, and they bring us up to
2 date as far as what's going on in the law. And one of the
3 aspects of it was ethics. And I wish I'd have had this to
4 bring up to them then and ask them just what their feeling is.
5 I'm pretty sure, based on what I know, it's not a ground for
6 disqualification. But if any of you know anything different,
7 you're not going to hurt my feelings, you let me know and
8 we'll look at it, and if it requires me to recuse myself, I'll
9 certainly do it.

10 MR. FELMLY: I'd also move the admission of the
11 documents that Mr. Effinger did say he had familiarity with,
12 and I also understood there is no objection to, which is the
13 environmental agreement, which does deal with the 26 million,
14 and that's Exhibit 11, we'd ask that that be marked as a full
15 exhibit.

16 MR. BARGREN: No objection.

17 (Plaintiff's Exhibit 11 received.)

18 MR. FELMLY: And that I also mark Exhibit 33, which
19 is Mr. Effinger's personal testimony summary statement of his
20 testimony to the PSC that we were referencing a few moments
21 ago related to the City's payments and the \$26 million
22 payment.

23 MR. BARGREN: No objection.

24 (Plaintiff's Exhibit 33 received.)

25 MR. FELMLY: There is, because of the status of the

THOMAS EFFINGER - DIRECT EXAMINATION

1 Effinger cost sheet, which at the moment requires further
2 information, I would like to move the admission of a document
3 which is Exhibit 242. This shouldn't be in controversy
4 because these schedules are accounting records that support
5 the nondisputed portion of the summary sheet that I showed you
6 before, but -- and these were provided, and this comes off the
7 more modern computer records. But as part of our effort to
8 make sure that it's clear that we are taking seriously the
9 effort to support and account for these claims, I would ask
10 that these supporting documents, which are Plaintiff's
11 Exhibit 242, be marked as a full exhibit.

12 THE COURT: Any objection?

13 MR. BARGREN: No objection to the exhibit. I assume
14 I can still cross-examine on this, on particular items, but no
15 objection to the fact that these amounts were paid to these
16 people.

17 (Plaintiff's Exhibit 242 received.)

18 MR. FELMLY: If I might just have a second, Your
19 Honor.

20 THE COURT: Sure.

21 (Brief interruption in proceedings.)

22 MR. FELMLY: Two quick things.

23 BY MR. FELMLY:

24 Q. We talked about NCP compliance a number of times during
25 the course of the examination today, and we've referenced

THOMAS EFFINGER - DIRECT EXAMINATION

1 places in the exhibit where the EPA has made reference to NCP
2 compliance.

3 Based on your experience over the years, do you have
4 familiarity and personal knowledge about the NCP compliance
5 standards that apply, and the features that cause something to
6 be NCP compliant?

7 A. Yes, sir. We talked about that earlier on today. And
8 there is a protocol that you need to follow. And the
9 objective is to take immediate action to mitigate or abate any
10 imminent or threatened release.

11 THE COURT: What does NCP stand for?

12 A. National Contingency Plan. And there's a fuller
13 description that's the National Oil and Hazardous Substances
14 Contingency Plan.

15 Q. And in terms of the monies that you have paid and the part
16 of the remediation that you've done here, this cost that
17 you've described, what is your position, Mr. Effinger, based
18 on your experience and knowledge, as to whether those costs
19 are NCP compliant?

20 A. I believe the protocol that we followed at the site, which
21 involved the money that was spent to accomplish it, has been
22 done fully in compliance with the National Contingency Plan.

23 Q. There was questions raised about during the course of our
24 case by UGI about whether there was public participation. Is
25 that one of the features, public information, one of the

THOMAS EFFINGER - DIRECT EXAMINATION

1 features of NCP compliance?

2 A. Yes, it is. And EPA made sure that we kept that component
3 in the forefront, that we continued to fulfill that
4 obligation, as well as others, in meeting National Contingency
5 Plan requirements.

6 Q. In terms of health and worker safety, which I understand
7 is something that's NCP compliant specific, or a requirement
8 of it, can you tell the Court whether steps were taken in that
9 area as well?

10 A. Each one of the work plans that I talked about earlier
11 that needed to be produced as part of the design and
12 describing to the agencies how we would conduct the work,
13 always had a health and safety plan component, not only for
14 worker protection but for management of the site.

15 Q. And I think I may have asked you this before. As all of
16 this work has gone on over all these years and all this story
17 of environmental work that I described, at any point did any
18 of the agencies ever indicate to you that they did not believe
19 your work was NCP compliant?

20 A. Nobody ever raised that issue from either the State or EPA
21 or any other regulatory agency.

22 MR. FELMLY: Your Honor, finally, there are a number
23 of other exhibits that I addressed today that I would move to
24 strike the I.D. on. I believe they're all without objection.
25 I don't know if this is a convenient point to do it at the end

THOMAS EFFINGER - DIRECT EXAMINATION

1 of the day, or if you had --

2 THE COURT: Why don't you just kind of when we take a
3 break, get your list together and look -- talk to other
4 counsel. When we take a break, talk to counsel and see if
5 there is any objection. If there's not, you can read the
6 numbers off.

7 MR. FELMLY: Okay. At some point later in the trial?
8 Or you mean right now?

9 THE COURT: I would suggest -- we're going to break.
10 We're not going to run real long, because the
11 cross-examination of this witness is going last awhile, and
12 I'm probably going to break at 5:30.

13 MR. FELMLY: That's fine. I showed this list earlier
14 to Mr. Bargren. I don't think there's any dispute on it.

15 THE COURT: Have you seen it?

16 MR. BARGREN: I saw it, but I didn't have a chance to
17 read it.

18 THE COURT: Why don't you just at the first break
19 give it to him and come back in the morning, he can tell you
20 if he has any objection to it.

21 MR. FELMLY: That's fine. Subject to the issue of
22 developing further the foundation for the numbers as we've
23 discussed with the Court, I have no further questions of this
24 witness at this time.

25 THE COURT: Let me say one thing before we get into

THOMAS EFFINGER - DIRECT EXAMINATION

1 the cross-examination. As far as this business of the
2 \$26 million to the City of Charleston, you didn't reoffer that
3 document. Counsel objected to it on the grounds of improper
4 foundation had been laid for it, and you attempted to lay a
5 foundation of this witness and did not reoffer it. And you
6 still object to it?

7 MR. BARGREN: That's correct, Your Honor.

8 THE COURT: So it's -- to the best of my knowledge,
9 it's not in evidence at this time.

10 MR. FELMLY: I thought we had when we put the
11 environmental agreement in.

12 THE COURT: I don't think you reoffered it, and he
13 objected to it and I sustained the objection to all of those
14 items that he objected to, subject to you laying an additional
15 foundation. And I know we have a complicated case with a lot
16 of documents, and it's easy to slip up on them. And the best
17 way not to slip up on it is to do it right now.

18 That being said, I'll treat that document just as I will
19 other documents. But I have grave reservations about its
20 admissibility for the purposes that you offer it. And the
21 reason is that no one from the City of Charleston has come in
22 here and said we actually performed these services.

23 Now, maybe when I get down to decision making, that won't
24 make any difference. But right now logic dictates to me that
25 it does make a difference.

THOMAS EFFINGER - DIRECT EXAMINATION

1 MR. FELMLY: But I have that witness coming in.
2 Steven Livingston, who is the representative of the City, who
3 has been deposed by the other side, and by myself --

4 THE COURT: That answers my question. That's the way
5 it comes in and you reoffer it.

6 MR. FELMLY: Thank you.

7 THE COURT: I want to let you try your case and --

8 MR. FELMLY: Your Honor, I need all the help I can
9 get.

10 THE COURT: I'm not giving you any help.

11 MR. FELMLY: Mr. Livingston will be here later in the
12 week and he will further lay the foundation for that monies
13 and I'll reoffer it at that point, I assume.

14 THE COURT: Okay. You're through?

15 MR. FELMLY: I'm through.

16 THE COURT: Do you want to cross-examine him now or
17 wait till in the morning?

18 MR. BARGREN: We could wait. Do you want me to
19 start?

20 THE COURT: Why don't we start. Let's go till 5:30,
21 5:35, something like that. You say you're going to take three
22 weeks on this case; you might take four if we don't get on the
23 ball.

24 MR. BARGREN: I hope not.

25 THE COURT: I don't know if I ever tried a case that

THOMAS EFFINGER - CROSS-EXAMINATION

1 lasted three weeks. I was trying to think back. That's a
2 long case, particularly nonjury.

3 CROSS-EXAMINATION

4 BY MR. BARGREN:

5 Q. Mr. Effinger, we've met before. I wanted to talk, I'll
6 start by asking you about the \$26 million payment and the
7 support for it that you mentioned, and some of the
8 documentation you received from the City.

9 One of the components of the \$26 million payment was costs
10 of putting in this Calhoun Street sewer, correct?

11 A. Yes, sir.

12 Q. Replacing the old brick archway?

13 A. Well, at least the environmental component of it, in
14 dealing -- we had to put in sheet piling, they had to put in
15 additional measures, flowable fill into the discharge into the
16 Cooper River.

17 Q. And SCE&G decided they wanted to be a good citizen, help
18 pay for this, correct?

19 A. I'm not sure what you're asking me, but we felt like it
20 did constitute environmental costs that deserved some
21 compensation for.

22 Q. But whether those costs are recoverable under CERCLA is a
23 different question. You'd agree with that, correct?

24 A. That's a legal matter I'm not qualified to answer.

25 Q. And I'm going to ask for Defendant's Exhibit 176. This is

THOMAS EFFINGER - CROSS-EXAMINATION

1 a letter from -- is it Mr. Mahan?

2 A. Randy Mahan. Yes, sir.

3 Q. And who is he?

4 A. He works for SCE&G. This is back when he worked in legal
5 counsel. And he's responding to Harriet Deal, who was an
6 attorney working on behalf of the Department of the Interior.

7 Q. Okay. And if we go to page -- I think it's page three of
8 this letter, and we'll pull up an excerpt here. Mr. Mahan
9 says that this interim action, referring to this sewer
10 replacement, is not anywhere required in the CERCLA process,
11 correct?

12 A. This interim action -- He's referring to a different
13 interim action here.

14 Q. Which one?

15 A. Well, you need to look at the whole letter. Can I see the
16 whole letter?

17 Q. Sure.

18 A. Which interim action are you referring to?

19 Q. Whatever Mr. Mahan is referring to.

20 A. Okay.

21 THE COURT: Do you want a hard copy of it?

22 A. Yeah, that would be helpful.

23 THE COURT: Does anybody have one available?

24 A. Which exhibit number am I looking for? 176.

25 Q. 176.

THOMAS EFFINGER - CROSS-EXAMINATION

1 A. One what?

2 Q. 176.

3 THE COURT: 176 -- Or is it 170?

4 MR. BARGREN: 176.

5 A. These have different numbers. These don't go to 176. I'm
6 sorry. Okay. I think in this document what Randy is doing is
7 saying that the Department of the Interior purchased this
8 property, knowing that it was contaminated. And so they have
9 some potential liability as well in dealing with these issues.
10 Oh, all right. In this case I think they're talking about the
11 interim action to mitigate the seep. Because this is in --

12 Q. This is 1997, so it's --

13 A. So it's before that.

14 Q. Can we agree on this and move on; whatever interim action
15 he's talking about here, and I think the document will speak
16 for itself, Mr. Mahan, the chief in-house corporate counsel at
17 SCE&G, did not think it was required by the CERCLA process,
18 right?

19 A. Well, he seems to be talking here about a pump and treat
20 system.

21 THE COURT: Let's give him a chance to look at it
22 overnight, then you can go on from there.

23 A. I think what he's talking about is that pump and treat
24 system that folks were asking us to install.

25 THE COURT: I'd rather have a more in-depth answer

THOMAS EFFINGER - CROSS-EXAMINATION

1 than that. Let's go on to something else and give him a
2 chance to look at it overnight, and I think you should give
3 him a chance to look at the letter that this letter is in
4 response to.

5 MR. BARGREN: Sure.

6 BY MR. BARGREN:

7 Q. In general, overall, this \$26 million payment by SCE&G to
8 the City was made to reimburse costs that the City had
9 incurred, correct?

10 A. That's correct.

11 Q. This was not a payment for any work that SCE&G performed
12 directly by itself, correct?

13 A. It was not for any work that SCE&G had already performed.

14 Q. It was a contribution to the City's costs.

15 A. It was to repay -- reimburse the City for environmental
16 costs that they had expended.

17 Q. Now, there was never an order to the City to do this work,
18 correct?

19 A. They knew that there was work that they had to do in order
20 to remove their project -- in order to move their project
21 forward, they had to demonstrate to the agencies that by at
22 least for the City by constructing the Aquarium and other
23 development in the area, they weren't going to cause a release
24 or a potential release of the manufactured gas plant
25 constituents.

THOMAS EFFINGER - CROSS-EXAMINATION

1 Q. But there was never an order by the EPA to the City for
2 this work, correct?

3 A. I don't know the answer to that.

4 Q. And there was never a Record of Decision, a ROD, issued by
5 the EPA to the City?

6 A. That's correct, there was no ROD issued for the City's
7 work.

8 Q. And the settlement between SCE&G and the City, that was --
9 that didn't go to court, for example, that was not a
10 judicially-approved settlement, correct?

11 A. No, it did not go to court. It was settled out of court.

12 Q. It was not approved by the EPA, correct?

13 A. The settlement would not be reviewed by the EPA.

14 Q. It was a private agreement between the City and the
15 utility.

16 A. I believe that would be fair.

17 Q. And the date of the agreement was September 20th, 1996,
18 correct?

19 A. I believe that's accurate.

20 Q. So that was just shy of ten years before the complaint in
21 this action, right?

22 A. Ten years -- I don't recall when we filed. I don't know
23 the timing of that offhand.

24 Q. Was there a public hearing conducted on this work?

25 A. No, sir. Not on the settlement agreement, there was no

THOMAS EFFINGER - CROSS-EXAMINATION

1 public hearing on that.

2 Q. Was there a public hearing of the sort you described with
3 the EPA with a formal transcript and so on conducted by the
4 EPA for the work that the City did?

5 A. There were public meetings that were held regarding the
6 City's work at the site, there were different agencies
7 involved, OCRM, I believe the Corps of Engineers may have been
8 the lead agency for them. So they did go through some review
9 and approval process with those regulatory agencies.

10 Q. But no hearing like the EPA conducted for your ROD.

11 A. No hearing -- I don't know the answer to that.

12 Q. And so you just described the number of factors that you
13 felt that SCE&G met to establish compliance with the NCP for
14 your ROD and your project, right?

15 A. Yes, sir.

16 Q. But not all of those elements were present with the City's
17 work, correct?

18 A. I don't know if they were or not. I believe under the
19 Corps of Engineers' process, there was some documents that
20 were created for some of the work that talked about the
21 reviews and the interagency meetings that were held for their
22 work, but I don't know all the details of the process that
23 they went through, no, sir.

24 Q. Do you remember we saw the spread sheet that you did
25 before --

THOMAS EFFINGER - CROSS-EXAMINATION

1 MR. BARGREN: And, Andrew, if we could have
2 Plaintiff's Exhibit 34? Well, I thought I had them right
3 here.

4 Q. If we go to Plaintiff's Exhibit 34, do you recognize this?
5 Or would it help to see the hard copy?

6 A. Yeah, that helps. This looks like some of the documents
7 or a section of the document that was submitted to us to
8 demonstrate the amount of money that the City spent in dealing
9 with environmental contamination.

10 Q. Right. And if we go to the sequential pages here, I think
11 one more. We start to get into some backup that the City
12 provided to you, correct?

13 A. Yes, sir.

14 Q. This is information that you used to support your
15 testimony for the PSC in support of the \$26 million?

16 A. Yes, sir, this is part of it. There was a lot more
17 attached to it, and I believe it was a pretty thick document
18 that was given.

19 Q. And what you had collected were these items that the City
20 sent you to support their numbers, and then you eliminated a
21 lot of those categories, correct?

22 A. Yes, sir.

23 Q. And then you were left with a little chart that started
24 with item G that we saw earlier in your testimony as part of
25 Exhibit 11, I believe. No -- in Exhibit 33, do you remember

THOMAS EFFINGER - CROSS-EXAMINATION

1 that, you had a little chart that said G, H and so on?

2 A. The one that summed up the numbers to the 30 million, is
3 that what you're referring to?

4 Q. Yes.

5 A. Okay.

6 Q. And that's what I can't find right now.

7 A. Okay.

8 Q. What I want to do is go to the detail in this exhibit for
9 Schedule G, it will be down a few pages. And if you like, I
10 can get you the paper copy.

11 THE COURT: Now, what is this?

12 MR. BARGREN: This is some backup that the City sent
13 to SCE&G.

14 Q. Correct, Mr. Effinger?

15 THE COURT: Doesn't it speak for itself?

16 MR. BARGREN: Well, there's some question about some
17 of the numbers, so --

18 THE COURT: Well, he didn't prepare it, and they say
19 they're going to call the man from the City to come in here
20 and testify as to this document.

21 MR. BARGREN: Okay. He prepared some -- he offered
22 these numbers in support for the 26 million.

23 THE COURT: He did, but he got them from the City,
24 and I've already voiced my feeling about that.

25 MR. BARGREN: Then we can wait on those.

THOMAS EFFINGER - CROSS-EXAMINATION

1 THE COURT: I don't see why not. If you have to
2 recall him, he's not going anywhere, I don't think.

3 MR. BARGREN: No, that's fine.

4 THE COURT: I just don't see any reason to go through
5 them twice, when he doesn't know where they came from, except
6 they came from City Hall.

7 MR. BARGREN: Okay. I'm fine with that, Your Honor.

8 THE COURT: This is a good time to break.

9 MR. BARGREN: I think so.

10 THE COURT: Let's take a recess till 10:00 in the
11 morning. I'm going to run a little different schedule
12 tomorrow. I've got somewhere I'd like to be before 5:30
13 tomorrow, so I'm going to cut lunch down from, say 1:00 to
14 2:00, then we'll recess about 4:00 or 4:15, okay? See you in
15 the morning.

16 MR. VARON: Your Honor, could I raise one procedural
17 issue for a second?

18 THE COURT: Sure.

19 MR. VARON: I beg your pardon. It occurred to Mr.
20 Bargren and I, we've kind of divided our case, as you can see,
21 Mr. Bargren is doing the statute of limitations, the costs.

22 THE COURT: I don't care how you divide it.

23 MR. VARON: I'm doing the core liability stuff. We
24 expect Dr. Shrifrin tomorrow to testify on a full range of
25 issues. Many of the exhibits that we expect to be offered are

THOMAS EFFINGER - CROSS-EXAMINATION

1 somewhat duplicative with other exhibits that talk about
2 personnel and inspections and accounting that I would be
3 handling with Mr. Blake, and so I'm wondering if it would be
4 permissible for us to split the cross-examination of Dr.
5 Shrifrin with Mr. Bargren crossing him on the environmental
6 issues, the --

7 THE COURT: I've never done that before, and I'll
8 have to look at our local rules. There may be a rule against
9 it. Usually if somebody attempts to do that, the objection is
10 one man at the stick.

11 MR. VARON: I understand, Your Honor.

12 THE COURT: That's the rule I've seen followed in
13 South Carolina my entire life.

14 MR. VARON: Obviously it's up to your discretion.

15 THE COURT: I don't know if it's discretionary or
16 not. Any objection to that?

17 MR. FELMLY: I do object to it, because I think it's
18 going to end up to tag team. I think there was a rule that
19 said one witness -- one lawyer to examine one witness.

20 THE COURT: It may be. Everybody speaks of it as if
21 it's a rule, but let me look in our local rules and find out.

22 MR. VARON: Your Honor, I think it will actually
23 streamline the matters based on knowledge.

24 THE COURT: Just a minute.

25 MR. WALLINGER: The rule is local Rule 26.01.

THOMAS EFFINGER - CROSS-EXAMINATION

1 THE COURT: It says you can't do that?

2 MR. WALLINGER: It says, and I'm quoting, "One
3 counsel for each party shall examine or cross-examine a
4 witness. During examination in open court, examining counsel
5 shall stand."

6 THE COURT: You know, that's the rule I've seen
7 followed all my life. And as far as closing arguments, you
8 can split that up and that's generally done. But as far as
9 examination of witnesses, because of this rule, we've applied
10 it, and there's another rule in it somewhere that says I can
11 overrule any rule I want to, but I haven't ever done it, and I
12 don't think it's wise to do it.

13 MR. VARON: Thank you for the clarification.

14 THE COURT: We'll be in recess.

15

16 (Court adjourned at 5:30 p.m.)

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REPORTER'S CERTIFICATION

I, Debra L. Potocki, RMR, RDR, CRR, Official Court Reporter for the United States District Court for the District of South Carolina, hereby certify that the foregoing is a true and correct transcript of the stenographically recorded above proceedings.

S/Debra L. Potocki

Debra L. Potocki, RMR, RDR, CRR